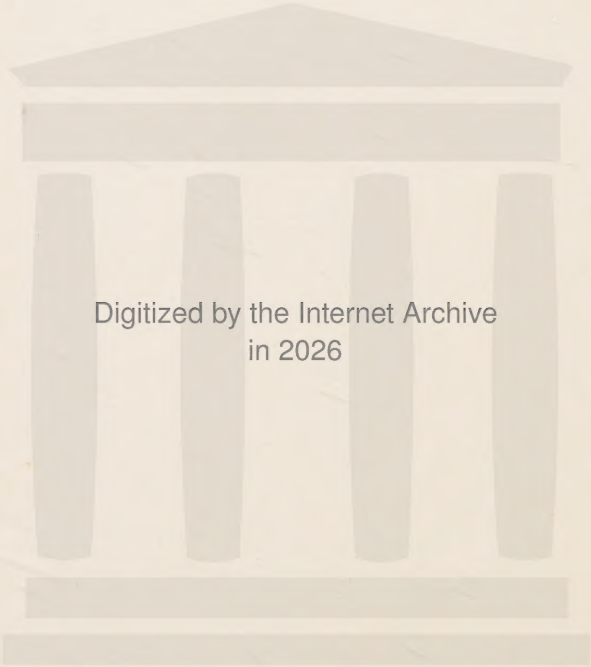
# THE VOYAGE of GROWING UP

TURNER-HALLOCK



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MALDEN HEALTH SERIES

# *The* VOYAGE *of* GROWING UP

BY

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# PREFACE

In grade three the health program should seek to develop desirable habits and attitudes toward health, even if it does not give the child a large amount of specific knowledge. This book presents pleasant experiences of real situations which constitute a natural approach to the subject of health. Many feel that they accompany the health training activities set up in the classroom better than the imaginary or fairy story approach.

The material in this book has been given a thorough trial in the classroom during the preparation of the manuscript.

All teachers will realize the value of adding to the interest of a book of this type in various ways. We have found that illustrations of things discussed in the stories may be brought into the classroom to good advantage. Pictures of ships illustrate the case in point. Sometimes materials themselves may be brought into the classroom. A simple compass is of great interest. A magnifying glass will allow the children to examine the skin as Uncle John did in the story. Most teachers will prefer to discuss the new words in each chapter before the lesson is developed. Dialogues and informal dramatization will help to make the material more real. One

teacher allowed children to participate in dramatization only after they had learned their own height and weight. The children may like to keep a log as Paul and Ann did, putting down the rules of the body ship on the blackboard or on sheets of paper which may be put together into a notebook. The notebook may be illustrated by pictures which the children have cut and brought into the classroom. The discoveries which Ann and Paul made form good subjects for language and writing lessons. Children enjoy retelling the stories.

C. E. T.
G. T. H.

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# THE VOYAGE OF GROWING UP

## CHAPTER I

### THE FINDING OF THE GOLDEN FLEECE

Ann and Paul had always lived in a great city. Now they had come to spend some time on Grandmother's farm. They had just had the measles, and Dr. Allen had said to Father and Mother, "What these children need is country life for a while." So Father had taken them to the farm to stay with Grandmother and Uncle John.

Uncle John was the doctor on a ship, and he was having a vacation. He told Father that he would give the children lessons so that they would not fall behind in their school work.

The very next day after they had reached the farm, Father had taken the train back home. So the children were feeling a tiny bit home-

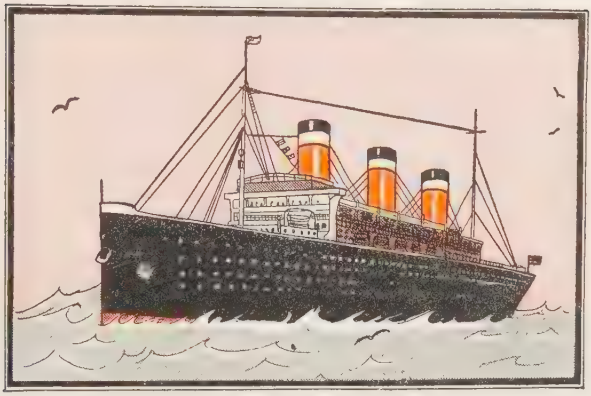
GRANDMOTHER WAS GLAD TO SEE ANN AND PAUL

sick. They were sitting on the porch steps wondering what to do when Uncle John came and sat down beside them. "Would you like me to tell you a story?" asked Uncle John.

"Oh, yes," cried Ann.

"This story is about a treasure hunt," said Uncle John.

Long years ago there lived a little boy named Jason. He was the son of a king. After a time, Jason's father became tired of ruling. He gave



UNCLE JOHN IS THE DOCTOR ON THIS SHIP

his throne to his brother Pelias. He said that Pelias could keep the throne until Jason was old enough to be a king.

When Jason grew up to be a young man he asked his uncle for the throne. But Uncle Pelias did not wish to give it to him. He thought of a way in which he might get rid of Jason. He knew that the young man liked danger, and so he asked him to go in search of the Golden Fleece.

The Golden Fleece was a rich treasure in a far country. It had once grown on a sheep which had saved two children from great danger.

When the sheep died its golden wool was hung on a tree and guarded by a fire-breathing dragon. Uncle Pelias said that the Golden Fleece really belonged to his family because the sheep had come from his country.

Jason was eager to go in search of the Golden Fleece. He invited forty-nine other young men to go with him. He had to build a ship big enough to hold this crew. In the days when Jason lived all the boats were very small. He built the first big ship. He named the ship the *Argo*.

There was great excitement on the day that Jason and his crew of heroes pushed the *Argo* into the sea. The young men climbed over the sides of the ship. Each one seized an oar. They made the *Argo* skim over the waves.

The story goes that the sea on whose shores the Golden Fleece was to be found was guarded by two small rocky islands. They were called the " Clashing Islands " because they floated on top of the ocean and clashed together when anything came between them.

Jason learned how to escape the danger of the Clashing Islands. When the ship reached them he freed a dove which flew between the rocks. The rocks clashed together but the dove lost only a few feathers from her tail. Then the islands bounded apart and Jason and his men rowed the ship swiftly between them before they could come together again. So the heroes passed safely on.

When the ship came to land in the country of the Golden Fleece, Jason asked the king of that country to give him the treasure. The king said he would give it up if Jason would do something to win it. He said: " You must hitch my two fire-breathing oxen to a plow. Then you must plow a field and afterward plant it with the teeth of a dragon which were given me as a present. I warn you that a very dangerous crop will spring from the dragon's teeth."

Jason said, " I will do this deed, O king."

A great many people came to watch Jason hitch the oxen to the plow. The oxen rushed toward the hero, breathing fire and smoke from

their noses. Jason went boldly to meet them. His friends trembled as they watched him. Jason spoke gently to the oxen. He patted their necks and slipped the yokes over their heads. Then he made them drag the plow back and forth across the field. The king was surprised, you may be sure. Jason's friends shouted for joy.

Then Jason planted the dragon's teeth. Wonder of wonders! No sooner were they planted than an army of men sprouted from the ground. The men had swords in their hands. They rushed at Jason waving their swords. Jason fought with them for a while. Then he threw a stone among them. Each one of the men thought that his neighbor had thrown the stone. They began to fight with each other. They paid no more attention to Jason.

Now Jason had to conquer the dragon which guarded the Golden Fleece. He sprinkled a few magic drops over the dragon's head. The great beast went fast asleep. Then Jason and his friends seized the Golden Fleece and ran with

JASON PUT THE DRAGON TO SLEEP

it to their ship. They rowed away from the shore as fast as they could, because they were afraid that the king might try to stop them. At last they came safely back to their own country.

Uncle Pelias, who had never expected to see Jason again, had to give up his throne. The people of the country were glad to have Jason for their king. There was great rejoicing when he showed them the treasure of the Golden Fleece.

## CHAPTER II

### LITTLE SHIPS

When Uncle John had finished the story Paul said, " I wish I had a ship and could have adventures as Jason did."

" So do I," said Ann. " I would go with you."

Uncle John laughed. " Did you ever play at going to sea? " he asked.

" Oh, yes," said Paul, " we make believe hunt for buried treasure and we play being shipwrecked on a desert island like Robinson Crusoe. We play ' Pirates,' too, sometimes. But it would be much more fun if we had a real ship."

" Of course," said Uncle John. " And now that I think of it, you do have a little ship. You live in it all by yourself. It is really the most complete little ship that any one has ever heard about. It has an engine to make it go and keep it warm. It has a pilot house. It has a wonderful crew to carry out your orders. While you are alive you can never, never leave your ship.

Whatever you do must be done in the ship, and wherever you go you must go in the ship. So you must take care of it and try to make it as comfortable as possible.

" The ship you live in starts out as a very little ship and grows into a big ship. When it is little, it has a mother ship and a father ship to take care of it and see that it does not run into danger or go too far out to sea. Can you guess the name of the ship? "

" I can," said Paul.

" It is our body," cried Ann.

" I guessed it too," said Paul.

" I know you did, Paul. So you see you really have a ship, after all," said Uncle John. " You can have wonderful adventures in it, but first you must learn how to take care of it all by yourself.

" Now suppose we go in and have supper, and afterward I'll tell you a story about a little boy who learned how to be a good captain of his body ship before he started out on a great adventure."

UNCLE JOHN STARTS TO TELL THE STORY

So the children went into the house and had supper — lettuce salad and baked potatoes, brown bread and butter, and milk and apple

sauce. After supper Uncle John said, " I am going to tell Ann and Paul a story, Grandmother, and then they are going to bed."

" May I hear the story too? " asked Grandmother.

" Of course," said Ann and Paul. She was a very nice grandmother, they thought. She had curly white hair and pink cheeks and her dresses had little bouquets of flowers printed on them. They went out on the porch. Uncle John and Ann and Paul sat on the steps, and Grandmother sat in a red rocking-chair.

" I like this part of the day the best of all," said Ann, spreading out her skirts.

" I do too," said Grandmother. " The world seems to be holding its breath waiting for something wonderful to happen."

" It is waiting for the dark so it can go to sleep," said Uncle John.

" Are you going to tell us the story? " asked Paul.

" Here it is," said Uncle John.

## CHAPTER III

### THE LITTLE BOY WHO KNEW WHAT HE WANTED TO DO

Long ago in a country called Greece there lived a little boy named Theseus. His father was a great king who ruled over the city of Athens. Theseus had never seen his father. He lived with his mother and grandfather in a city far away from Athens. His father was too busy ruling his people to come and see Theseus.

" But, Mother," said Theseus, one day when the two were sitting on a rock in the woods, " if Father is too busy to come and see me, why may I not go and see him? "

" You are too little," said his mother. " Athens is far away. A great forest where giants and robbers live lies between our home and your father's city. You are not big and strong enough to travel through this forest safely."

"But, Mother, when shall I be strong enough?" asked Theseus.

"Do you see this great rock we are sitting on?" asked his mother. Theseus looked at it. It seemed very large to the little boy. "Do you think you can lift the rock?" asked his mother.

The Rock Seemed Very Large to Little Theseus

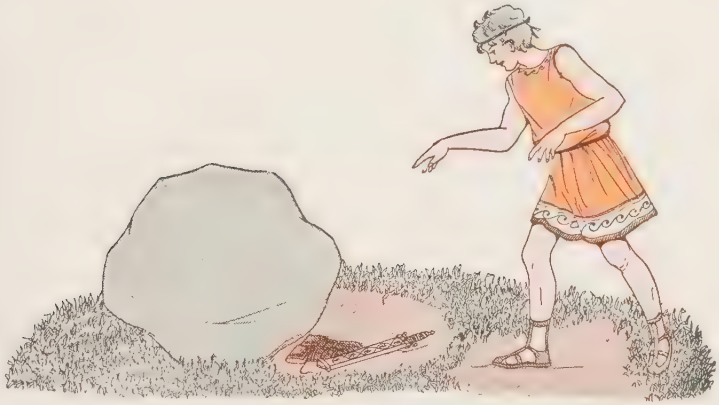
"I will try, Mother," said little Theseus. But although he tugged at the rock with all his might he could not lift it.

"When you are strong enough to lift this rock," said his mother, "you may go to Athens."

Now Theseus knew that he must grow big and strong so that he could lift the rock. He did so want to see his father. He wanted to travel through the great forest and fight the wicked robbers and giants. He wanted to see the beautiful city of Athens. And so he began to exercise his muscles to make them strong. He ran races with other boys on the hills about his home. He played tug-of-war with them. He tried to see how far he could throw stones. He went swimming in the mountain streams. He ate simple food too — whole-wheat bread and milk and greens and fruit and honey. He wore loose, comfortable clothes. He slept long hours in the open air.

Time and again he tried to move the rock. But although he grew stronger and stronger he could never lift it. At last the time came when he thought that it seemed to move a tiny bit while he was tugging at it. " Soon I can lift it," he said to himself.

And then the day came when Theseus was strong enough to pull the great rock from its bed



At Last Theseus Grew Strong and Moved the Rock

in the earth. He was no longer a little boy. He had grown up to be a strong young man. Underneath the rock lay a sword and a pair of shoes. "Your father left them there for you," said his mother. "He said that when you were strong enough to lift the rock, you were to put on the sword and the shoes and come to him."

So Theseus kissed his mother good-by and went out into the world to seek his father. He met with many adventures along the road. He conquered the robbers and the giants who had

made the forest dangerous for travelers. At last he came to the city where his father ruled.

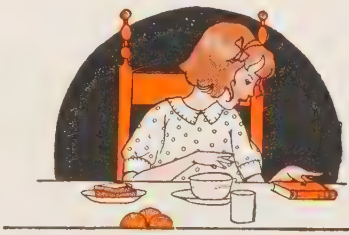
His father, the king, was very glad to see what a strong young man his son had grown up to be. Theseus did many great deeds in his life, and after his father died he became the king of Athens.

When Theseus was still a little boy he knew what he wanted to do when he grew up. He trained himself to be strong and brave so that he could conquer the robbers and giants in the forest which lay between his home and the city of Athens. He found out all the things he needed to do to be healthy and strong. Then he did them.

## CHAPTER IV

### THE SHIP'S LOG

Grandmother had breakfast all ready for Ann and Paul when they came downstairs the next morning. They had orange juice, oatmeal, toast, and milk. Ann found a little book at her place. All the pages in the book were blank except the first and last pages. On the first page the words " Ship's Log " were printed.



ANN FINDS THE LOG BOOK

Uncle John smiled when Ann asked him if he had put the book there. " Yes," he said. " I thought that you and Paul would like to learn about your body ships and how to take care of them. Now aboard ship a log of each voyage is kept. The ship's log is a story of the voyage. I thought you would like to keep a Log Book, too, and write down what you discover about caring

for your body ships. You know I told your father that I would give you lessons. Keeping the Log Book will take the place of writing and spelling and English lessons."

" We will give the Log Book to Mother when we go home," said Ann.

Uncle John turned to the back of the Log Book. " Here we are," he said, showing to Ann and Paul the pages he had found. On the pages were rows and rows of figures. Uncle John said that from one of the sets of figures he could tell about how much a boy should weigh for his height and age. From the other set of figures he could tell about how much a girl should weigh for her height and age.

" The captain of a ship," said Uncle John, " has maps and instruments to guide him on his voyage. Two of the instruments which boys and girls can use to make sure that their body ships are growing properly are the measuring rod and the scales. The scales tell us how much we weigh. The measuring rod tells us how tall we are. The height-weight-age table is the

map. If we know what we weigh and how tall we are and how old we are, we can find out on the map whether our body ships are on time in the voyage of growing up.

" Paul, do you know how tall you are? "

" Yes," said Paul. " Father measured us and weighed us before we left home. I am fifty-two inches tall."

" How old are you? "

" Nine years old."

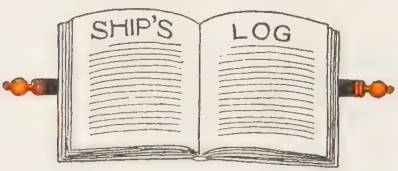
" What do you weigh? "

" Sixty pounds."

Uncle John looked at the Boys' Height-Weight-Age Table. He said: " This map tells me that a boy of your height and age should weigh about sixty-four pounds. You are a few pounds behind in your voyage of growing up."

" The measles made me thin," said Paul. " The doctor told Mother that there isn't a thing the matter with me. He said that I just need lots of sleep and good food and fresh air and sunshine."

" All right," said Uncle John. " We will write




## HEIGHT-WEIGHT-AGE TABLE FOR BOYS

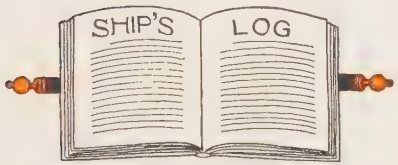
By Bird T. Baldwin, Ph.D., and Thomas D. Wood, M.D.

| Height Inches | Av. Wt. for Ht. Lbs | 5 Yrs. | 6 Yrs. | 7 Yrs. | 8 Yrs. | 9 Yrs. | 10 Yrs. | 11 Yrs. | 12 Yrs. | 13 Yrs. | 14 Yrs. | 15 Yrs. | 16 Yrs. | 17 Yrs. | 18 Yrs. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38 | 34 | 34 | 34 | | | | | | | | | | | | |
| 39 | 35 | 35 | 35 | | | | | | | | | | | | |
| 40 | 36 | 36 | 36 | | | | | | | | | | | | |
| 41 | 38 | 38 | 38 | 38 | | | | | | | | | | | |
| 42 | 39 | 39 | 39 | 39 | 39 | | | | | | | | | | |
| 43 | 41 | 41 | 41 | 41 | 41 | | | | | | | | | | |
| 44 | 44 | 44 | 44 | 44 | 44 | | | | | | | | | | |
| 45 | 46 | 46 | 46 | 46 | 46 | 46 | | | | | | | | | |
| 46 | 48 | 47 | 48 | 48 | 48 | 48 | | | | | | | | | |
| 47 | 50 | 49 | 50 | 50 | 50 | 50 | 50 | | | | | | | | |
| 48 | 53 | — | 52 | 53 | 53 | 53 | 53 | | | | | | | | |
| 49 | 55 | — | 55 | 55 | 55 | 55 | 55 | 55 | | | | | | | |
| 50 | 58 | — | 57 | 58 | 58 | 58 | 58 | 58 | 58 | | | | | | |
| 51 | 61 | — | — | 61 | 61 | 61 | 61 | 61 | 61 | | | | | | |
| 52 | 64 | — | — | 63 | 64 | 64 | 64 | 64 | 64 | 64 | | | | | |
| 53 | 68 | — | — | 66 | 67 | 67 | 67 | 67 | 68 | 68 | | | | | |
| 54 | 71 | — | — | — | 70 | 70 | 70 | 70 | 71 | 71 | 72 | | | | |
| 55 | 74 | — | — | — | 72 | 72 | 73 | 73 | 74 | 74 | 74 | | | | |
| 56 | 78 | — | — | — | 75 | 76 | 77 | 77 | 77 | 78 | 78 | 80 | | | |
| 57 | 82 | — | — | — | — | 79 | 80 | 81 | 81 | 82 | 83 | 83 | | | |
| 58 | 85 | — | — | — | — | 83 | 84 | 84 | 85 | 85 | 86 | 87 | | | |
| 59 | 89 | — | — | — | — | — | 87 | 88 | 89 | 89 | 90 | 90 | 90 | | |
| 60 | 94 | — | — | — | — | — | 91 | 92 | 92 | 93 | 94 | 95 | 96 | | |
| 61 | 99 | — | — | — | — | — | — | 95 | 96 | 97 | 99 | 100 | 103 | 106 | |
| 62 | 104 | — | — | — | — | — | — | 100 | 101 | 102 | 103 | 104 | 107 | 111 | 116 |
| 63 | 111 | — | — | — | — | — | — | 105 | 106 | 107 | 108 | 110 | 113 | 118 | 123 |
| 64 | 117 | — | — | — | — | — | — | — | 109 | 111 | 113 | 115 | 117 | 121 | 126 |
| 65 | 123 | — | — | — | — | — | — | — | 114 | 117 | 118 | 120 | 122 | 127 | 131 |
| 66 | 129 | — | — | — | — | — | — | — | — | 119 | 122 | 125 | 128 | 132 | 136 |
| 67 | 133 | — | — | — | — | — | — | — | — | 124 | 128 | 130 | 134 | 136 | 139 |
| 68 | 139 | — | — | — | — | — | — | — | — | — | 134 | 134 | 137 | 141 | 143 |
| 69 | 144 | — | — | — | — | — | — | — | — | — | 137 | 139 | 143 | 146 | 149 |
| 70 | 147 | — | — | — | — | — | — | — | — | — | 143 | 144 | 145 | 148 | 151 |

| Age — years | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Height (Inches) | Short | 43 | 45 | 47 | 49 | 51 | 53 | 54 | 56 | 58 | 60 | 62 | 64 | 65 |
| | Medium | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 63 | 65 | 67 | 68 | 69 |
| | Tall | 49 | 51 | 53 | 55 | 57 | 59 | 61 | 64 | 67 | 70 | 72 | 72 | 73 |
| Average Annual Gain (Lbs.) | Short | 3 | 4 | 5 | 5 | 5 | 4 | 8 | 9 | 11 | 14 | 13 | 7 | 3 |
| | Medium | 4 | 5 | 6 | 6 | 6 | 7 | 9 | 11 | 15 | 11 | 8 | 4 | 2 |
| | Tall | 5 | 7 | 7 | 7 | 7 | 8 | 12 | 16 | 11 | 9 | 7 | 3 | 4 |

*— Courtesy American Child Health Association*

Note: Age is taken at the nearest birthday; height at the nearest inch; and weight at the nearest pound.




## HEIGHT-WEIGHT-AGE TABLE FOR GIRLS

By Bird T. Baldwin, Ph.D., and Thomas D. Wood, M.D.

| Height Inches | Av. Wt. for Ht. Lbs. | 5 Yrs. | 6 Yrs. | 7 Yrs. | 8 Yrs. | 9 Yrs. | 10 Yrs. | 11 Yrs. | 12 Yrs. | 13 Yrs. | 14 Yrs. | 15 Yrs. | 16 Yrs. | 17 Yrs. | 18 Yrs. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38 | 33 | 33 | 33 | | | | | | | | | | | | |
| 39 | 34 | 34 | 34 | | | | | | | | | | | | |
| 40 | 36 | 36 | 36 | 36 | | | | | | | | | | | |
| 41 | 37 | 37 | 37 | 37 | | | | | | | | | | | |
| 42 | 39 | 39 | 39 | 39 | | | | | | | | | | | |
| 43 | 41 | 41 | 41 | 41 | 41 | | | | | | | | | | |
| 44 | 42 | 42 | 42 | 42 | 42 | | | | | | | | | | |
| 45 | 45 | 45 | 45 | 45 | 45 | 45 | | | | | | | | | |
| 46 | 47 | 47 | 47 | 47 | 48 | 48 | | | | | | | | | |
| 47 | 50 | 49 | 50 | 50 | 50 | 50 | 50 | | | | | | | | |
| 48 | 52 | — | 52 | 52 | 52 | 52 | 53 | 53 | | | | | | | |
| 49 | 55 | — | 54 | 54 | 55 | 55 | 56 | 56 | | | | | | | |
| 50 | 58 | — | 56 | 56 | 57 | 58 | 59 | 61 | 62 | | | | | | |
| 51 | 61 | — | — | 59 | 60 | 61 | 61 | 63 | 65 | | | | | | |
| 52 | 64 | — | — | 63 | 64 | 64 | 64 | 65 | 67 | | | | | | |
| 53 | 68 | — | — | 66 | 67 | 67 | 68 | 68 | 69 | 71 | | | | | |
| 54 | 71 | — | — | — | 69 | 70 | 70 | 71 | 71 | 73 | | | | | |
| 55 | 75 | — | — | — | 72 | 74 | 74 | 74 | 75 | 77 | 78 | | | | |
| 56 | 79 | — | — | — | — | 76 | 78 | 78 | 79 | 81 | 83 | | | | |
| 57 | 84 | — | — | — | — | 80 | 82 | 82 | 82 | 84 | 88 | 92 | | | |
| 58 | 89 | — | — | — | — | — | 84 | 86 | 86 | 88 | 93 | 96 | 101 | | |
| 59 | 95 | — | — | — | — | — | 87 | 90 | 90 | 92 | 96 | 100 | 103 | 104 | |
| 60 | 101 | — | — | — | — | — | 91 | 95 | 95 | 97 | 101 | 105 | 108 | 109 | 111 |
| 61 | 108 | — | — | — | — | — | — | 99 | 100 | 101 | 105 | 108 | 112 | 113 | 116 |
| 62 | 114 | — | — | — | — | — | — | 104 | 105 | 106 | 109 | 113 | 115 | 117 | 118 |
| 63 | 118 | — | — | — | — | — | — | — | 110 | 110 | 112 | 116 | 117 | 119 | 120 |
| 64 | 121 | — | — | — | — | — | — | — | 114 | 115 | 117 | 119 | 120 | 122 | 123 |
| 65 | 125 | — | — | — | — | — | — | — | 118 | 120 | 121 | 122 | 123 | 125 | 126 |
| 66 | 129 | — | — | — | — | — | — | — | — | 124 | 124 | 125 | 128 | 129 | 130 |
| 67 | 133 | — | — | — | — | — | — | — | — | 128 | 130 | 131 | 133 | 133 | 135 |
| 68 | 138 | — | — | — | — | — | — | — | — | 131 | 133 | 135 | 136 | 138 | 138 |
| 69 | 142 | — | — | — | — | — | — | — | — | — | 135 | 137 | 138 | 140 | 142 |
| 70 | 144 | — | — | — | — | — | — | — | — | — | 136 | 138 | 140 | 142 | 144 |

| Age — years | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Height (Inches) | Short | 43 | 45 | 47 | 49 | 50 | 52 | 54 | 57 | 59 | 60 | 61 | 61 | 61 |
| | Medium | 45 | 47 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 63 | 64 | 64 | 64 |
| | Tall | 47 | 50 | 53 | 55 | 57 | 59 | 62 | 64 | 66 | 66 | 67 | 67 | 67 |
| Average Annual Gain (Lbs.) | Short | 4 | 4 | 4 | 5 | 6 | 6 | 10 | 13 | 10 | 7 | 2 | 1 | |
| | Medium | 5 | 5 | 6 | 7 | 8 | 10 | 13 | 10 | 6 | 4 | 3 | 1 | |
| | Tall | 6 | 8 | 8 | 9 | 11 | 13 | 9 | 8 | 4 | 4 | 1 | 1 | |

*—Courtesy American Child Health Association*

Note: Age is taken at the nearest birthday; height at the nearest inch; and weight at the nearest pound.

down your height and age and weight in the Log Book, and then in a month we will see how many pounds you have been able to make up.

"Now, Ann, it is your turn. How old are you?"

"Eight years old, Uncle John."

"How tall are you?"

"Forty-seven inches."

"How much do you weigh?"

"Forty-seven pounds."

Uncle John looked at the Girls' Height-Weight-Age Table. "A girl of your height and age should weigh about fifty pounds," said Uncle John. "You are a little behind too. It is the measles' fault, I suppose?"

"Yes," said Ann.

"Did the doctor say the same things about you that he said about Paul?"

"Yes."

"Very well. We will see how many pounds you can catch up in a month. You see the first rule for the body ship to follow is, *Try to gain in weight each month*. Later on we are going to discover what we must do to gain."

"Now can we start learning about our body ships?" asked Paul, eagerly.

"Not just yet," said Uncle John. "We have to write up the Log Book first. I will help you this time, but afterward you and Ann must keep the Log Book by yourselves."

This is what Ann and Paul and Uncle John wrote in the Log Book about weighing and measuring.

*Rules of the Body Ship*

Try to gain in weight each month.

*Discoveries*

We have discovered that the scales and the measuring rod are the instruments which tell us whether our body ships are growing properly. The Height-Weight-Age Table is the map which tells us whether we are on time in the voyage of growing up. We must learn what to do to gain in weight each month.

# CHAPTER V

## DRINKING WATER

When the Log Book had been written, Uncle John said: " The first thing we must discover about our body ships is how much water to give them each day. When a ship goes to sea the captain must be sure that he has enough water on board for the sailors to drink. Each day our body ships go on a voyage through the hours. At night they go into sleep harbor to rest. We must find out how much water our body ships need on their voyage through the day from the time they leave sleep harbor until they go back to it again. We can make believe that we are going on a voyage of discovery."

Before starting on the voyage Ann and Paul went out into the kitchen to put up a lunch. Grandmother helped Ann make brown bread and butter and cream cheese sandwiches. Uncle John showed Paul where to find apples in a barrel down in the cellar. Then Uncle John

filled three empty fruit jars with milk, and Grandmother gave him six fat molasses cookies from the cookie jar.

Uncle John found two canvas knapsacks. He packed the cookies and sandwiches in one

ANN AND PAUL PUT UP THE LUNCH

and strapped it on Paul's back. In the other he put the milk and apples, and strapped it on his own back. Ann carried three little tin cups.

They kissed Grandmother good-by. "We shall be back for supper," said Uncle John.

"Aye, aye, sir," said Grandmother.

They went down to the brook at the end of

ANN AND PAUL AND UNCLE JOHN START ON THE VOYAGE

the yard. The brook was only a foot deep and not very wide. In the water lay a little flat-bottomed boat tied to a willow tree. The boat's name was the *Daisy*. It was painted green and had three seats, one at each end and one in the middle. The brook was not wide enough for oars, so Uncle John had to shove the boat along with a pole. When they came to very shallow places Ann and Paul and Uncle John had to get out, and Uncle John pulled the boat over by the tow-rope.

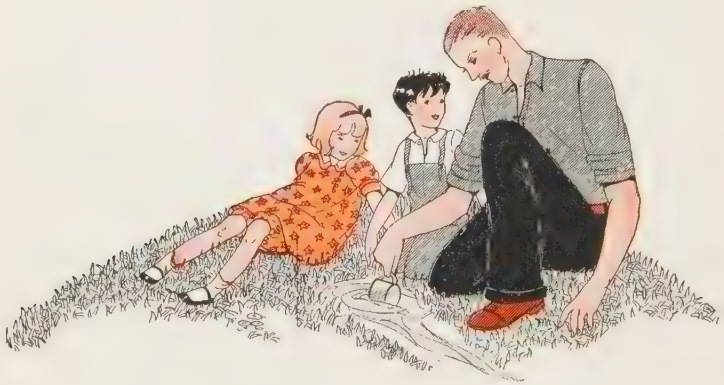
Soon they came to a waterfall, and Uncle John said: " Here is where we leave the boat. All ashore! " They jumped out and Uncle John tied the boat to a tree. Then they started off across a field. At the end of the field was a stone wall. Beyond this was a wood lot.

They climbed the wall and hopped down on the other side. Trees grew everywhere in the wood lot, and the ground was covered with moss and dried leaves. There were tall ferns, too, growing in the shade. Ann and Paul went ahead. They crept from tree to tree and listened behind each one. They made believe that they were explorers on a desert island. When they stopped to listen they heard all sorts of tiny sounds — the peep-peep of a bird, the plop of a falling acorn, the rustle of a leaf. The fourth time they stopped, Uncle John said, " Hark! " They listened. " Tell me what you hear."

" It sounds like a very little bell ringing," said Ann.

" It is the song of a brook as it runs down hill," said Uncle John.

They went in the direction of the sound. Soon they came to a small stream. It was about as wide as Uncle John's hand. It ran over long grasses. The water had combed the grass smooth and flat and silvery. The tinkly sound was made by the water running over a stone.



THEY EACH HAD A DRINK FROM THE SPRING

"We must follow the brook and find out where it begins," said Uncle John. So they walked beside the stream up a little hill. After a short walk they came to a clear pool with pebbles at the bottom. This was where the brook began. Uncle John said the pool was a spring. He said that he knew the water in the

spring was pure, and that the children could drink it. They each had a drink. Then they sat down on dry stones by the spring and ate their lunch.

Ann and Paul had never seen a spring before. At home in the city their water came out of a faucet, and in school out of a bubble fountain. They asked Uncle John how the water got into the spring. While they were eating their lunch Uncle John told them how, in a story called "The Six Little Water Drops Who Wanted to See the World."

## CHAPTER VI

### THE SIX LITTLE WATER DROPS WHO WANTED TO SEE THE WORLD

Once upon a time a family of six water drops lived in a broken saucer in some one's back yard. A dry leaf lay over the saucer and the water drops were in the dark. They were not happy because they wanted to see the world. One night a wind blew the dry leaf away. In the morning the sun shone right on the broken saucer. He heard the water drops talking together. " Oh, ho! you want to see the world, do you? " said the sun. " All right, up you go! "

The water drops felt themselves being pulled up through the air. The sun was lifting them up into a cloud. They became separated from one another. But they were not lonesome, for in the cloud they found hundreds of other little water drops.

All the water drops thought it was fine to be in the cloud. They went sailing along in the

THE FIRST LITTLE RAINDROP FELL INTO THE OCEAN

sky over the world. Down below they saw trees and mountains and rivers and seas and houses and people walking about. Everything in the world looked very small to the water drops away up there in the sky.

Down on the earth all the people said: " It is going to rain. See how big and dark that cloud is! " Soon the little water drops came pattering

down out of the cloud. Now they were called raindrops.

One little raindrop fell into the deep ocean. It became part of a big green salty wave. It beat up against the side of a great black steamship. The little drop heard the people on the ship say, "How beautiful the sea water is!" Once the wave ran up on a beach of yellow sand. A little barefooted boy let the wave ripple over his feet. The drop heard him say, "I like to feel the sea tickling my toes."

The second little raindrop of the family fell into a brook. "To the sea! To the sea!" sang the brook, and it ran tumbling and laughing over the stones toward the river which would carry it to the sea. Once the raindrop fell into a little pool and whirled round and round. It heard two boys talking on the bank of the brook. "I am so thirsty," said one boy. "I think I will drink out of the brook."

"No, no!" said the other boy. "Don't you remember? Father told us never to drink water from brooks. It might make us sick. We are

THE SECOND LITTLE RAINDROP FELL INTO A BROOK

almost home. Let us wait for a drink until we get there."

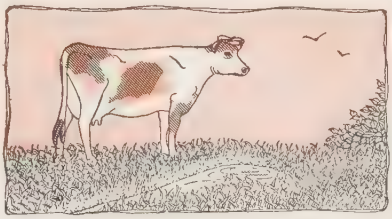
The third raindrop fell on the ground. Down, down it sank through the soft earth. It

met the little white root of a flower. "I need a drink," said the little white root, and it soaked up the raindrop. Up, up the stem of the flower went the raindrop. Now it was a part of the flower.

A Flower Drank the Third Raindrop

The fourth raindrop fell on the ground, too. It went sinking down so far into the dark earth that it thought it would never stop. Then it reached hard rock. It could not sink through the rock, so it joined the little stream of water that was slowly flowing along on top of the rock. Very soon the rock went up hill. What should the little raindrop do? It could not go back. It could not go forward. It could not go down. It must go up. And up through the earth it went

pushed behind by the little stream running along the rock. It found itself, at last, in a clear pool in the sunlight. This pool was a spring. Along to the spring came a creamy white cow. "I need a drink of water," said the cow. So she took a long drink. The little raindrop was in that drink. Now it was a part of the cow.



A Cow Drank the Fourth Raindrop

The fifth raindrop also sank down through the earth until it reached a rock. The rock was far, far down in the dark earth. The little raindrop thought it would never reach the top of the earth again. But soon it came to a deep hole that some men had dug down through the earth to the rock. This hole was a well, and the raindrop stayed in it with hundreds of other drops of water. One day the raindrop was pumped up out of the well into a shiny tin cup. A little boy drank all the water out of the cup. Now the raindrop was part of the little boy.

A Little Boy Drank the Fifth Raindrop

The sixth raindrop fell into a big lake. For a long time it stayed there playing with other little water drops. Then one day it found itself at the mouth of a great, round pipe. This pipe

was large enough to hold a railway train. The little raindrop with many others went plunging down through the pipe for miles and miles until it came to a city. There the big pipe branched out into many smaller ones. It was just as if the big pipe were the trunk of a tree and the little pipes were the branches. Through one of these little pipes the raindrop traveled to the very top

THE SIXTH RAINDROP HELPED TO MAKE A LITTLE GIRL CLEAN

of an apartment house. The next thing it knew it was tumbling out through a water tap into a shiny white tub. In the tub was a little girl taking a bath. What fun she was having! The little water drop helped to make her clean.

And this is the end of the story about the six little water drops that wanted to see the world.

" I think I will take another drink," said Ann, when Uncle John had finished the story. Paul was thirsty too. They each had another drink of spring water. " I wonder what makes us thirsty," said Ann.

" ' I am thirsty,' is the little message that your body gives you when it needs water," said Uncle John. " You see, we are made mostly of water. Paul weighs sixty pounds. If he could squeeze all the water out of himself as he wrings all the water out of his bath sponge, he would weigh only twenty pounds. About forty pounds of Paul's weight is water.

" People are always losing water from their bodies in different ways. In the skin are tiny holes called *pores* that we can see only through a magnifying glass. Water is always leaking out of the body through these pores. On a hot day, or when we have been playing hard, we can see it. We call it *perspiration.*

" Another way that water leaves the body is in the breath. On a cold day we say that we can *see* our breath. What we really see are the fine drops of water that we have breathed out. Since we are losing water all the time, what do you suppose would happen to us if we never took any water into our bodies? "

" I suppose we should dry up like my primrose that I forgot to water for a week," said Ann.

" That is it," said Uncle John. " People have lived as long as a whole month without food, but no one can get along without water for more than five days. The food that we eat contains a great deal of water. But that is not enough. *To keep the body healthy we need to drink at least four glasses of water a day.* This is the second rule we must remember in learning how to handle our body ships."

After making the discovery about drinking water, Uncle John said it was time to go home. He and Paul threw water from the spring on the ashes of the fire. Then they went floating home in the boat.

For supper they each had a little brown dish of spinach with a poached egg on top, and brown bread and butter, and milk and rice pudding. After supper Ann and Paul wrote in the Log Book. Here is what they wrote:

*Rules of the Body Ship*

Drink at least four glasses of water a day.

*Discoveries*

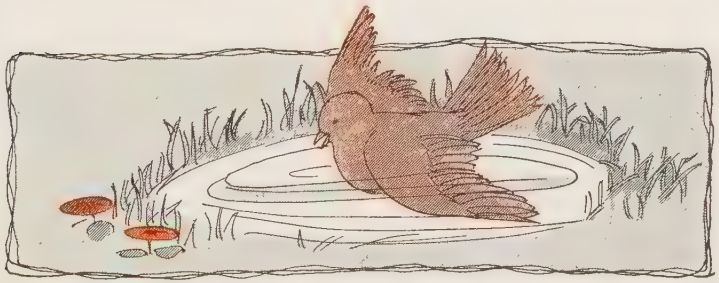
Today we went exploring in the wood lot. We found a spring. We learned how water gets into the spring and into brooks and seas and into pipes which carry it to cities. We learned that it is very important to drink enough water. Our body ships lose water through the breath and through the skin and in other ways. So we must drink at least four glasses of water a day to give our body ships all the water they need.

# CHAPTER VII

## BE CLEAN

The next morning after breakfast Paul, Ann and Uncle John started out for a walk. They stopped to look at a bird in a tree near the house.

"Have you ever seen a bird take a bath?" said Uncle John.



This Is How a Bird Takes a Bath

"I have," said Ann.

"How does he do it?" asked Uncle John.

"He splashes his wings in the water and shakes himself all over and pokes his feathers with his bill. Then he flies up into a tree and sings and sings and sings."

"Well, an all-over bath and all clean clothes

make us feel just as the little bird feels," said Uncle John. " Perhaps we do not climb into a tree and sing, but we march down the street proudly with our heads up, for the joy of being clean.

" The captain of a ship always keeps his ship clean. So the third rule for our body ships is *be clean.* There are a great many different parts of a ship to keep clean. The decks, the brass work, the woodwork, all have to be scrubbed and polished every day. Then the machinery of the ship has to be kept oiled and clean too.

" There are many different parts of our body ships that must be kept clean. The skin, the hair, the finger nails, the teeth, all have to be taken care of if each captain is to be proud of his ship.

" The first thing we must do to keep our skin clean is to give it a warm soapy bath at least once a week. You remember that the body loses water through the skin. This water is called *sweat* or *perspiration.* It comes from the salty

water of the blood, and pours out through little holes in the skin. Perspiration is made of salt and water. The water dries on the outside of the skin and the salt is left. We cannot see it but it is there. Then if you look closely at the hairs on your arm, you see that each one grows in a little pit. Into these pits some tiny tubes empty oil to keep the skin soft and smooth. Oil catches dust very easily, just as easily as sticky fly-paper catches a fly.

" Now you see why we should take a warm soapy bath at least once a week. It washes from our skins all the dried salt and the dust and dirt caught in the oil.

" Some parts of our bodies we must wash with soap and water every day. These are the parts that are not protected by our clothes from dust and dirt. Do you know what they are? "

" The face," said Paul.

" And hands and neck and ears," said Ann.

" That is right," said Uncle John. " Your face and hands and neck and ears are like the flags and banners of a ship. We look at the

flags on a ship to find out to what country it belongs. When people look at you they usually look first at your face. If your face is clean, they know that you belong to the country

THIS BOY BELONGS TO THE COUNTRY OF CLEANLINESS

of cleanliness. If the teacher in school wants some one to pass out papers or to take a message, she picks out a boy or girl with clean hands to do it. We soap our hands well when we wash them. After rinsing them we must remember to wipe them dry on a clean towel.

Damp hands sometimes become rough and chapped.

" The next thing we can do for our body ships is to take a morning rub-down. If you ever go on a voyage in a ship, the first thing you will hear in the morning is the splash, splash of water thrown on the decks, and the swish, swish of sailors' mops. The ship is having its morning rub-down.

" Long years ago in Greece the boys were trained from babyhood to have strong bodies. They learned to harden their bodies in every way possible. One of the things they did was to take a cold shower every day. The cold water was placed in a large bowl set on a stand three feet high. The little Greek boy stood on a flat stone and dipped water out of the bowl and poured it over his body. Then he rubbed himself briskly. My, how warm and glowing he felt after his shower! No other boys and girls have ever been better at games and running races than the Greek boys and girls. This is because they took such good care of their bodies.

"When we wake up in the morning we are still sleepy. We need something to stir us up and make us ready for the day. So the very first thing we do is to go to the bathroom. There

THIS IS HOW A GREEK BOY TOOK A SHOWER BATH

we take a shower, or we rub ourselves all over with a wet sponge or washcloth. Then we rub ourselves briskly with a rough towel. This makes us feel warm all over and wide awake. If

we do it every day it helps to make our bodies strong and our minds alert. It hardens us so that we do not take cold easily. It makes us better at games, as it made the Greek boys and girls in the days of long ago.

" Now suppose you write about keeping clean in the Ship's Log. You have just time enough to do it before lunch."

*Rules of the Body Ship*

Keep the skin clean.

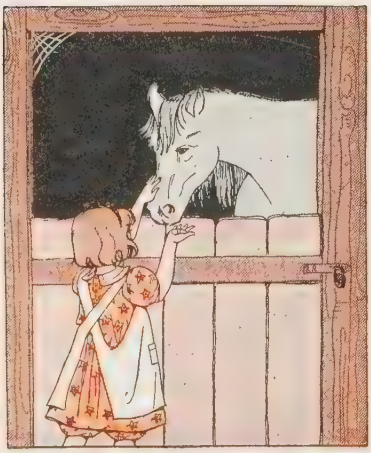
*Discoveries*

This morning we learned that we must keep our skins clean if we are to be proud of our body ships. We must take a warm soapy bath at least once a week. We must wash our faces, necks, ears, and hands with warm water and soap every day. In the morning we must take a rub-down to help make our bodies strong and our minds wide awake.

## CHAPTER VIII

### THE CARE OF THE HAIR

The sun came out after lunch. Grandmother gave Ann and Paul each a lump of sugar to feed old Dan, the horse. Uncle John went with the children to the barn. Old Dan had just finished eating his lunch, too. He ate the sugar out of the children's hands.



DAN'S HAIR IS SMOOTH AND GLOSSY

Ann patted Dan's glossy mane. "I like to pat Dan," she said. "He feels so smooth and clean."

"That is because I give his coat of hair a good brushing every day," said Uncle John.

"I brush my hair every day, too," said Ann.

" I brush it in the morning and I brush it at night before I go to bed."

" So do I," said Paul.

" I brush my doll's hair, too," said Ann. " I brush it and brush it, but it never looks smooth and shiny like Dan's hair."

Uncle John laughed. " We will go back and sit on the porch," he said. " Then I will tell you about hair."

They went back to the farmhouse and sat on the porch steps. " You see, Ann," began Uncle John, " your hair is alive and Dan's hair is alive. Your doll's hair is dead. Each one of your hairs grows out of a little pit in the skin. Opening into this little pit is an oil tube which supplies the oil to keep your hair soft and moist. If it were not for the oil, your hair would be dry and rough just like your doll's hair. Each one of your hairs, too, must have food, because anything which is alive must be fed. Your blood carries food to your hair, just as it carries food to other parts of your body. By brushing your hair you bring the blood to the little hair roots.

You also spread the oil all through your hair. That is why well-brushed hair always looks so smooth and shiny and *alive*.

" At one time people used to wear wigs made of dead hair over their own hair. Ministers wore one sort of wig, doctors wore another sort.

Once upon a Time People Used to Wear Wigs

Lawyers wore great white curled wigs. Men in the army and navy had wigs with curls on the forehead and pigtails behind. Women wore enormous wigs decorated with great bows, ribbons, feathers, and flowers. Sometimes these great wigs had a ship in full sail or a little garden set on top of them. The women who wore them could not go through a doorway without stoop-

ing. The poor ladies of that time often had headaches from wearing tight, top-heavy wigs.

" Nowadays people do not wear wigs unless they have no hair. We think that our own live hair is much better looking than a wig of dead hair. But we must take care of our hair if we are to be proud of it. It is one more little flag which tells people whether or not our body ships belong to the country of cleanliness. Our hair is oily and so it catches dust and dirt very easily. To keep it clean and healthy we must wash it about every two weeks. By washing it we get rid of the waste oil and the dust."

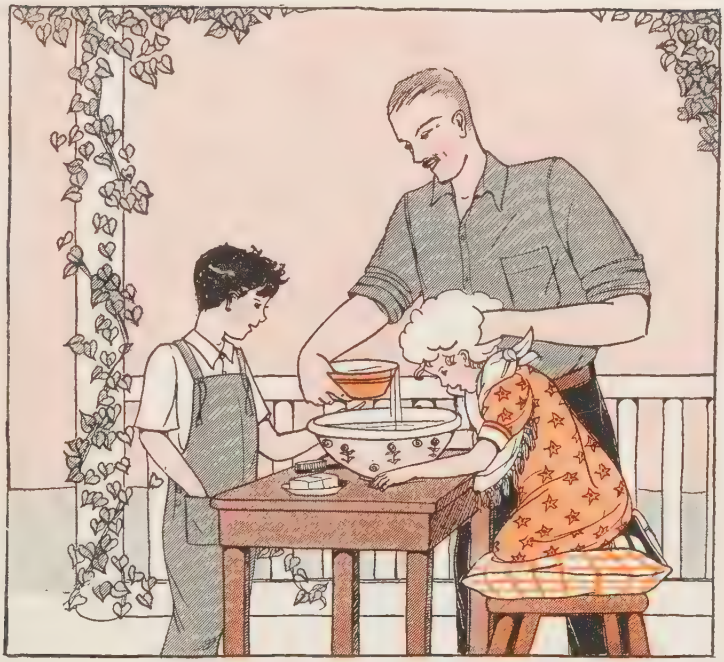
" I think I will wash my hair," said Ann. " It has not been washed for two whole weeks."

" All right," said Uncle John. " We will do it right here on the porch. Paul, you ask Grandmother for a bowl and I will get the water. Ann must go upstairs and find her comb and brush and a cake of soap and some towels."

When all these things had been placed on a table on the porch, Uncle John pinned a towel about Ann's neck. He told her to comb the

tangles out of her hair and to give it a good brushing. Then he poured warm water out of one pitcher into the bowl and mixed some tiny pieces of soap with the water until the bowl was full of soapsuds. He wet Ann's hair with the warm soapsuds and rubbed her hair and scalp with the tips of his fingers. Ann looked as if she had on a little close-fitting wig of curly white hair. Then Uncle John rinsed her hair by pouring warm water over it. He said that Ann's hair was especially oily, and so he soaped it and rinsed it again. He was careful to wash all the soapsuds out in the second rinsing, because he said that left-over soap in the hair makes it sticky. Then he rinsed Ann's hair again with cool water from another pitcher, and at the very last he gave it a dash of cold water. He said that this cold water dash would keep Ann from taking cold.

Uncle John dried Ann's hair by rubbing it with towels. It was a warm clear day, and so after the rubbing Ann finished drying her hair by shaking it out in the sunshine. "In the



ANN HAS HER HAIR WASHED

winter time," said Uncle John, " we dry hair by shaking it over a radiator or stove. We must be careful not to take cold by drying the hair in drafts."

" Now we must wash the comb and brush," said Uncle John. " It would be foolish for Ann to use a dusty comb and brush on her shiny

clean hair. Our combs and brushes should be washed often, just as often as we wash our hair."

Uncle John went into the kitchen and came back with a basin of warm water. The water smelled of ammonia, and Uncle John said he had put in a whole teaspoonful. He washed Ann's brush in the water, but he was careful not to wet the back. The dirt came out of the brush in two or three minutes. Then he dipped the brush in clean water to rinse it. He shook the water out and put it, bristles down, in the sunshine to dry. Then Ann washed and dried her comb.

After the porch had been made neat and tidy once more, Uncle John taught the children this song:

Twice a day we take great care
To brush our hair, to brush our hair.
Be it black or be it red
We brush our hair from top of head.
Be it yellow, be it brown,
We brush it down, we brush it down.

Twice a month we take great care
To wash our hair, to wash our hair.
Be it red or be it black
We wash the front, we wash the back.
Be it yellow, be it brown,
We wash it up, we wash it down.

Then Uncle John went out to weed the garden, and Ann and Paul wrote about the care of the hair in their Ship's Log.

This is what they wrote:

*Rules of the Body Ship*

Brush the hair at least twice a day. Wash it at least twice a month.

*Discoveries*

Our hair is alive. To keep it smooth and glossy we must brush it at least twice a day. To keep it clean and healthy we must wash it every two weeks.

## CHAPTER IX

### PIRATE PLANTS

The children were playing " Pirates " down by the brook. " Pirates " was one of their favorite games. To be a pirate you had to hide in the bushes and capture a ship. The ship was any one who passed by. It might be Dan the horse, or Ben the dog, or Bill the banty rooster. This time it was Uncle John.

Paul rushed out and caught him by the coat. " Surrender! " he shouted, " or we will come aboard you! "

" I surrender," said Uncle John. " Are you going to make me walk the plank? "

" Oh, no," said Ann.

" I know," said Paul. " Let's make him take us for a walk."

" All right," said Uncle John. " Where shall we go? "

" To the deep dark woods," said Ann.

And so they went walking in the woods.

UNCLE JOHN TAKES THE CHILDREN WALKING IN THE WOODS

Uncle John told Ann and Paul the names of all the trees in the woods. There were maple trees, oak trees, birch trees, walnut trees, hickory trees, and cedar trees. Uncle John said they could tell the trees by their leaves. Each kind of tree has a different kind of leaf.

They saw a green vine, with clusters of three leaves, climbing up an oak tree. Uncle John

said this was poison ivy. " If you touch poison ivy leaves," said Uncle John, " little sore itchy blisters will come out on the skin."

They saw pretty red toadstools growing in a shady place, and then they came to a bush covered all over with berries. The berries were a lovely deep blue. Ann said they looked good enough to eat. Uncle John said they would make her sick if she ate them. He said that in the country people must learn to know and to keep away from poisonous plants. They must never eat fruit or berries unless they already know that they are good to eat.

" In *Swiss Family Robinson,*" said Ann, " whenever the father was not sure that a thing was good to eat he fed it to an animal. If it did not hurt the animal he said it would not hurt his children."

Uncle John said, " Well, we have no animals to try things on, so you must always ask a grown-up person about things you are not sure are good to eat."

" We will," promised Ann.

" The plants which hurt us if we touch them or eat them are like pirates," said Uncle John. " They have to come aboard our body ships to do us any harm. They are the poisonous mushrooms and certain berries that make us sick if we eat them, and the poison ivy and poison oak plants that hurt us if we touch them. These harmful plants are big enough to be seen and we can keep away from them. But in the world there are other wicked pirate plants so very tiny that we cannot see them."

" Then how do we know about them? " asked Paul.

" For hundreds and hundreds of years people did not know about them," said Uncle John. " No one knew that these plants lived in the world because no one could see them. Then along came a man who was just like a magician in a fairy tale. He invented a very powerful eye. Very tiny things seen through this eye look like large things. We call this eye a microscope.

" The man who invented the microscope was the very first person to see things as small as

the wicked little pirate plants which make us sick when they come aboard our body ships."

NAME THESE PLANTS

"Are all tiny plants wicked?" asked Ann.

"No, indeed," said Uncle John. "In the world of tiny plants there are good little plants as well as bad little plants, just as there are good big plants and bad big plants. Here in the woods we can see many different kinds of plants. Let us see how many kinds we can name."

THESE ARE THE LEAVES OF USEFUL PLANTS. CAN YOU NAME THEM?

"Grass," said Paul.

"Trees," said Ann.

"Yes," said Uncle John. "And grasses and trees and vegetables are good big plants which

we cannot live without. What other plants do you see? "

"Flowers," said Ann.

"Ferns," said Paul.

"Flowers and ferns and mosses are plants which are pretty to look at," said Uncle John. "They are useful, too, in many ways. Then there are some plants which bother us when they grow in our gardens. We call them weeds. They are troublesome but not harmful."

FERNS AND FLOWERS ARE GOOD BIG PLANTS

HERE ARE SOME HARMFUL PLANTS. WHAT ARE THEY?

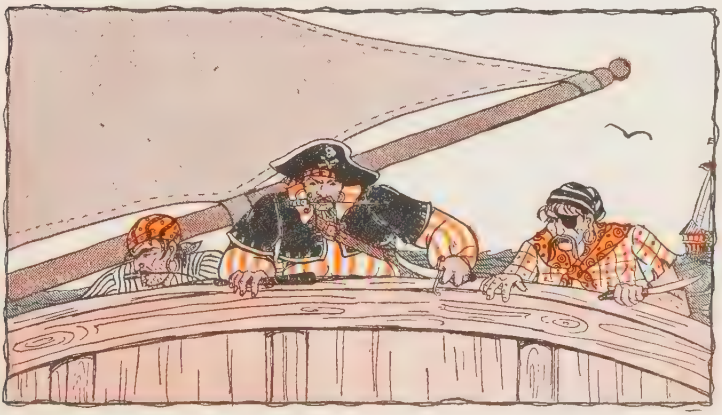
Do You Know the Names of These Troublesome Plants?

"I see poison ivy," said Paul, "and toadstools."

"Those are the big plants which are really harmful," said Uncle John. "But just think how very few of them there are in the world! We can see a great many more good plants than we can see bad plants. Now if we could make ourselves very small and enter the world of tiny plants which no one can see without the help of a microscope, we should see a great many good little plants working busily to help us. We should see little plants making bread rise. We should see others helping to make butter and cheese, and others turning apple juice to vinegar.

" Then we should see other tiny plants which are just nuisances like the weeds. These mischievous little plants make food spoil.

" Last of all we should see the few tiny plants



Pirates Had to Come Aboard a Ship to Do Great Harm

which are really wicked. Many people call these wicked little plants ' sickness germs,' but we shall call them little pirate plants. The little pirate plants cannot possibly hurt us unless they enter our body ships. We can keep them out if we are careful, and so we do not need to be afraid of them."

A Quarantine Sign Means "Pirates on Board, Keep Out"

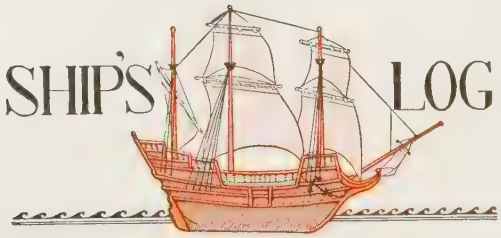
"How can we keep them out?" asked Paul.

"We keep them out," said Uncle John, "by following the common rules of cleanliness. We wash our hands before eating. We do not put anything except food and water and a toothbrush into our mouths. We never exchange bites of fruit or candy, or drink from a cup or glass any one else has used. We use our own towels and no one else's. We do not drink any water unless we know it is pure. We wipe the necks of milk bottles before pouring out the milk. We wipe off all fruit covered with skins which we eat and we never eat any food

This Girl Always Wipes Her Hands on Her Own Towel

which has fallen on the floor or ground. We stay away from people who have catching sicknesses and we stay in quarantine if we have a catching sickness ourselves or have been exposed to one."

This is what Ann and Paul wrote in the Log:




*Rules of the Body Ship*

Keep the pirate plants from coming aboard the body ship.

*Discoveries*

We have discovered that there are a great many good plants and a few bad plants. Some of the bad big plants are poison ivy, poison oak, certain kinds of berries, and poisonous mushrooms. We must keep away from poison ivy and poison oak.

There are many plants so tiny that we cannot see them without the help of a microscope. Most of these plants are good. A few are bad. We avoid the bad ones by following the common rules of cleanliness.

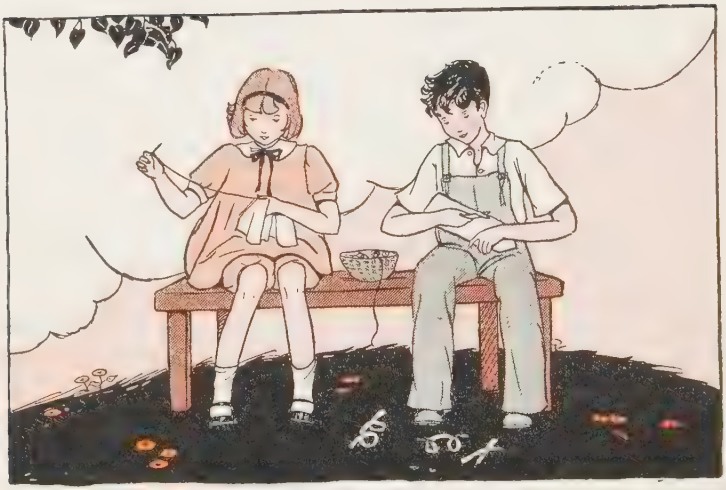
## CHAPTER X

### GUARDING THE BODY SHIP AGAINST BIG HURTS

Paul and Ann were making a ship. Paul had a shiny new jack-knife and Uncle John had given him a piece of soft pine wood. Grandmother had given Ann a piece of cloth and a thread and needle with which to make the sail. Paul was hollowing out the ship's deck when the knife slipped and cut his thumb. " Oh! " cried Paul, " I've cut my thumb! "

" Grandmother," called Ann, " Paul has cut his thumb! "

" Has he? " asked Grandmother. " Let me see." She looked at the little cut. Then she brought a basin of warm water with a few drops of medicine in it. She bathed the cut and put some medicine on it. Then she bound it up with a piece of gauze which she took out of a little package. " There," she said, " it will soon be well."



ANN AND PAUL WERE MAKING A SHIP

Ann and Paul decided not to work on the ship any more that day. They went to find Uncle John to tell him about the cut.

" Paul cut his thumb," said Ann, when they had found Uncle John, who was picking strawberries for supper. Paul held up his bandaged thumb.

" You have it well guarded," said Uncle John.

" Yes," said Ann, " Grandmother washed it with warm water that had medicine in it and then she tied it up."

" Now the little pirate plants cannot get into Paul's body ship through the cut," said Uncle John. " No matter how small a cut or scratch may be we must remember that the pirate plants are smaller. The safest plan is to kill any of them that may have gone into the cut. Iodine is one of the medicines which can kill the pirate plants. Then we cover up the cut with a piece of clean cloth or cotton to keep out the pirate plants. It is best to let a grown-up person take care of a cut or scratch as Paul did. Grown-ups know when cloth and cotton are really clean, and they know how to use medicines which kill the pirate plants.

" I knew a little boy once who never told a grown-up person when he had cut or scratched himself. Iodine makes a cut smart and this little boy did not like to be hurt."

" Paul did not mind when Grandmother put medicine on his cut," said Ann. " He only said ' Oh! ' when he cut himself."

" Good," said Uncle John. " I am proud of him. You see in the war against the pirate plants

we must be brave. A little hurt often keeps away a big hurt. I wonder if you can think of any little hurts that keep away big hurts."

Ann and Paul thought hard. "I know of one," said Ann, at last.

"What is it?" asked Uncle John.

"Last year the doctor put medicine in my arm three times with a needle. When the needle went in, it hurt a tiny bit, but I did not cry. The doctor said that the medicine would protect me from a sickness called diphtheria."

"Yes," said Uncle John, "and diphtheria is a very big hurt indeed."

Paul said: "The doctor did the same thing to me too, and to all the children in our grade. I've thought of another little hurt," he added proudly. "It hurts a little to be vaccinated, but the doctor says that vaccination protects us from a sickness called smallpox."

"Yes," said Uncle John. "Smallpox is a very wicked pirate. I'm glad you have been vaccinated so that he cannot come aboard your body ship."

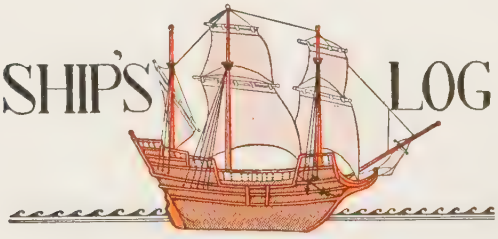
OUR FRIEND THE DOCTOR LOOKING OVER A BODY SHIP

" I know another way to keep from having big hurts," Uncle John went on. " It is to help your friends, the doctor and the nurse, when they come to look you over in school. The captain of a ship is always glad to have his ship looked over. He wants to know if there is any little leak which might turn into a big leak when the ship is far out at sea. He wants to know that his engines are in good working order. He wants to know that he has enough fuel on board to last through the trip.

" The doctor can find out whether there is anything that needs mending on your body ship. You can help by doing whatever he asks you

to do when he is looking you over. You can help too by acting as his messenger, and carry home his report. If he thinks you need to have your tonsils and adenoids out, or to wear glasses, or to go to bed earlier, you must be a good captain of your body ship and cheerfully help your friend, the doctor, make all the necessary repairs."

This is what Ann and Paul wrote in the Log:




*Rules of the Body Ship*

Help the doctor and the nurse guard the body ship against big hurts.

*Discoveries*

We have discovered that we must be brave and not mind the little hurts which protect our body ships against big hurts. We must always take care of little cuts and scratches. We must cheerfully let the doctor vaccinate us and protect us against diphtheria. We must be glad when the doctor and the nurse look us over. We do everything they want us to do.

## CHAPTER XI

### HOW PLANTS MAKE FOOD

After breakfast the next day Uncle John said he had to do a little work. So Paul and Ann played cowboys and Indians. Later on, Grandmother called to Ann and asked her if she would like to learn how to make baked custard. Ann said, " Yes." Paul came into the kitchen, too, to watch.

Grandmother sat down in a chair and told Ann all the things she needed for the custard. She had to bring a bottle of milk and four eggs from the ice-box, and sugar, salt, and nutmeg from the closet. Then she had to set out six little glass molds, a yellow bowl, an egg beater, a saucepan, a baking pan, and a strainer. Grandmother told her just what to do as she went along.

She had to measure everything very, very carefully. When the custards were made Grandmother put them into the oven to bake.

ANN MEASURED EVERYTHING VERY CAREFULLY

Then Ann and Paul went out to find Uncle John. They found him in the vegetable garden pulling up weeds.

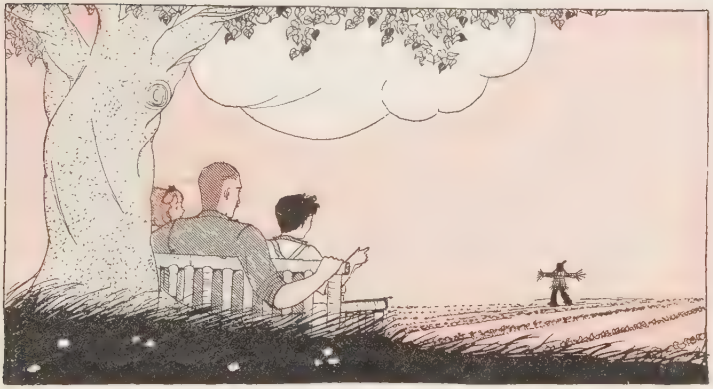
" Uncle John," said Ann, " I have been making custard."

" Good," said Uncle John.

" I measured everything very, very carefully," said Ann.

" Did you? " said Uncle John. " I can hardly wait to eat my custard." He wiped his face with his handkerchief. " My, it is hot," he said. " Let us go and sit under the apple tree."

From the bench under the apple tree Ann and Paul could see the rows and rows of green vege-



ROWS OF GREEN VEGETABLES GREW IN THE GARDEN

tables. Uncle John told them the name of each vegetable. He said that we can tell the vegetables apart by their leaves just as we can tell the trees apart by the leaves. There were peas and beans, spinach and lettuce, celery and cabbage, carrots, turnips, and potatoes in the garden.

"The plants are making food, too," said Uncle John.

"How do they make food?" asked Ann.

"They make food with the help of the sun," said Uncle John.

Paul and Ann looked at the shiny yellow face

of the sun winking down at them through the leaves of the apple tree. " But, Uncle John," said Ann, " the sun is far, far away in the sky and the plants are down here on the earth. How can the sun help the plants make food? "

Uncle John said, " Look around at all the plants and tell me in what way they are all alike."

So Ann and Paul looked around. They looked at the vegetables and the apple tree, and the dandelions in the grass, and a white birch tree at the edge of the garden. Then Paul said, " The apple tree is round and fat."

Ann said, " The birch tree is little and has a thin trunk."

Paul said, " The dandelion has yellow flowers and the bean plant has red flowers."

" But all of the plants," said Ann and Paul together, " have green leaves."

Uncle John said: " Leaves are green because they are full of tiny bits of green stuff. This green stuff soaks up the sunlight just as a sponge soaks up water. With the help of this sunlight

the plant makes the food with which it builds its roots and stems and leaves and seeds. In all the whole world plants are the only things that can soak up sunlight and use it to build up fuel substances.

" The plant makes food out of sunlight, water, and air, and minerals from the soil. Ann made her custard out of milk, eggs, sugar, salt, and nutmeg. Now let us see if we can tell the difference between the things that Ann used to make the custard and the things the plant uses to make food. Where did the milk that Ann used come from? "

" From a cow," said Paul.

" Where did the eggs come from? "

" From hens," said Ann.

" Where did the sugar come from? "

" I know. From a sugar cane plant," said Paul.

" And where did the nutmeg come from? "

Ann and Paul did not know.

" From a nutmeg tree," said Uncle John. " So

you see that everything which Ann used to make her custard, except salt, came from living plants or animals. If you think of all the different kinds of foods that you eat, except mineral foods such as salt, you will see that they, too, were once part of something alive. The fruit and vegetables were once part of living plants. The meat we eat was once part of a living animal. Our milk and butter come from cows. Our eggs were laid by hens. Our bread and our cereals are made from grain that grew on a living plant. The bodies of all people and animals are made of food that was once alive.

" Now think of the things the plant uses to make food. Are sunlight and air and soil and water alive? "

" No," said Paul.

" Then you see that the plants do not eat food that was once alive," said Uncle John. " But they change the things which they get from the air and soil and water into living food with the help of sunlight. People cannot use and store

up sunlight as the plants do. They must get their stored sunlight from plants and from animals that eat plants.

" Our body ships use this stored sunlight as fuel. You know that to make a real ship go, the captain must see that the engines are fed with coal or some other fuel. The heat from burning fuel turns the water in the ship's boilers into steam and the steam drives the engines of the ship. To heat the ship, too, fuel must be burned. The food we eat is the fuel which keeps our body ships warm and gives them the power to move about and to work and play.

" It does something else. It makes our body ships grow and it mends any part of them that needs mending. Our bodies are made of the food we eat, just as Ann's custards were made of the food which she measured out so carefully. To make a good body we must be just as particular about what we eat as Ann was about what she put in her custard. We must learn which foods are best to keep the body ship warm, and to help it work and play, and to grow."

This is what Ann and Paul wrote in the Ship's Log about food:

*Rules of the Body Ship*

Give the body ship the right kind of food.

*Discoveries*

We have discovered that our bodies are made of the food we eat. Food is also the fuel of the body ship. It keeps us warm and gives us the power to move about and to work and play. This power comes from the sun. The plants take this power from the sun through their green leaves. All other living things get this sunlight power by eating plants or the animals that eat plants.

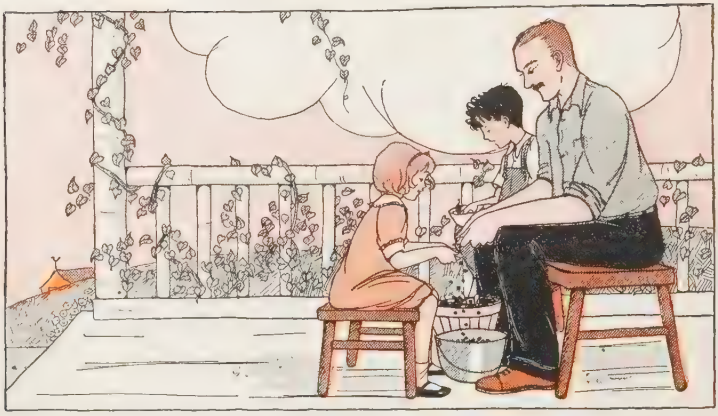
## CHAPTER XII

### A GOOD BREAKFAST FOOD

After Uncle John had told Ann and Paul how the plants make food by using sunlight power they went into the garden and picked peas for lunch. While they were picking the peas Uncle John told them that peas are the seeds of the pea plant. The plant stores in the seeds all the food that the little new plants will need to help them grow roots and leaves for themselves.

Ann and Paul and Uncle John took the peas out on the shady porch of the farmhouse and shelled them for lunch. While they were shelling the peas Uncle John told them a story about little oat grains. This is the story:

" Once upon a time there was a mother oat plant that had thirty little seed babies," said Uncle John. " The mother was not like the old woman who lived in a shoe and had so many children she did not know what to do. No, in-



UNCLE JOHN TOLD A STORY WHILE HE AND THE CHILDREN SHELLED PEAS

deed! The mother oat plant knew just what to do. She filled her little seed babies full of good food and put them all to bed. Each baby had a cradle and all day and all night they slept in their cradles while the warm summer winds sang them lullabies.

"Then one day the mother oat plant whispered, 'Wake up, wake up, my little ones, you are going out into the world. Good-by, good-by.' The seed babies were very happy to think that at last they were going out into the world. 'Good-by, good-by,' they said to the mother oat plant.

" ' It is very exciting out in the world,' thought the seed babies, as they were hustled and jostled out of their little cradles by the farmer who owned the oat field. The first ten little oat grains went right into one bag; the next ten little oat grains went right into another bag; the last ten little oat grains went right into a third bag. Each bag was full and running over with oat grains.

Each Little Seed Baby Had a Snug Cradle

" The oat grains in the first bag stayed in the barn all winter long. In the spring they were taken out into a field by the farmer. My, how the oat grains enjoyed the warm clear sunlight after the long winter dark! But, dear me, no sooner were they out of the bag than they felt themselves sinking into the earth. It was so hard, so hard to part with the clear beautiful sunlight again.

" But when the earth was packed around the

oat grains each one felt a little stir of new life. The kind spring rain soaked gently about them. The sun reached down through the ground and touched each little oat grain with its warm fingers. Then the tiny bit of life in each oat grain began to eat and eat. It ate the good food which the mother oat plant had stored away in it last summer. Soon the oat grains grew white roots which went down, down into the earth looking for more food and water. They poked little green leaves above the ground into the air and the sunlight. Now each little oat plant was big and strong enough to take care of itself. The seed babies were able to make roots and leaves for themselves because they had good food to eat while they were beginning to grow.

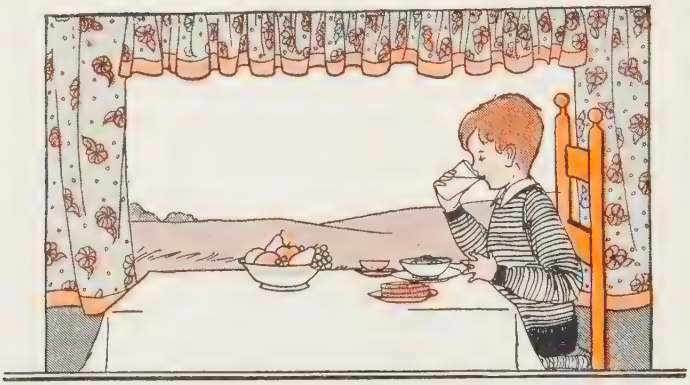
" The oat grains in the second bag were put in the barn too. But one day they were poured out into a long box in the stall where Dapple-gray, the horse, lived. Dapple-gray was a great strong horse. ' Crunch, crunch,' Dapple-gray ate up all the oat grains in the box. Now they had become part of the horse. Dapple-gray's

coat was shining silver and his muscles were strong, because every day he ate some of the good food which the mother oat plants stored away in their seed babies.

" The oat grains in the third bag went on a long railroad journey. ' Bumpity bump,' went the freight cars over the rails. They were taking bags and bags of oat grains to the factory to be made into oatmeal. When the oats arrived at the factory, what a cleaning and a roasting and a shaking they were given!

" Each oat grain had a little outside coat. In the factory these little coats were taken off, because boys and girls would not like to find the oat grain's coat in their oatmeal. At last the oat grains were rolled flat between great rollers and then packed into cardboard boxes.

" One day a mother went to the grocery store. She bought a package of oatmeal. In the package were two of the ten little oat grains that had gone into the last bag at the farm. For breakfast next morning her little boy ate one of the oat grains in his dish of oatmeal and her little



THIS BOY IS EATING A GOOD BREAKFAST

girl ate the other. One reason why the boy and girl have rosy cheeks and strong muscles is because every day they eat some oatmeal for breakfast.

"Whole-wheat bread is another good food made of the seeds of a plant," said Uncle John, after he had finished telling the story. "When we eat oatmeal and whole-wheat bread and peas and beans, it is pleasant to think that we are eating the food which the mother plant stored away. It helps *us* grow strong muscles and rosy cheeks.

"Here is a good breakfast on which to start

the day: a hot cereal, milk, fruit, whole-wheat bread, and perhaps an egg."

This is what Ann and Paul wrote in the Log Book about breakfast:

*Rules of the Body Ship*

Start the day with a warm breakfast.

*Discoveries*

We have discovered that the seeds of plants are good for the body ship because they contain all the good food which the mother plant stored away for the baby plants to grow on. We should eat a hot cereal every morning for breakfast because it helps to keep us warm and makes our body ships ready for their voyage through the day. A good breakfast is made up of a hot cereal, milk, fruit, whole-wheat bread, and perhaps an egg.

## CHAPTER XIII

### MILK: THE BEST FOOD OF ALL

" Ann! Paul! " called Uncle John.

" Here we are, Uncle John! " cried Ann and Paul. They came running up from the brook.

" I am going to the cow pasture for Buttercup," said Uncle John; " would you like to come? "

" Yes," said Ann and Paul together.

It was lovely walking through the meadows to the pasture. They had to cross the brook on stepping stones and almost fell into the water. In the pasture pink clover blossoms and buttercups were growing in the grass.

Uncle John said, " Let me see if you children like butter." He held a buttercup under Ann's chin.

" The buttercup makes Ann's chin look yellow," said Paul.

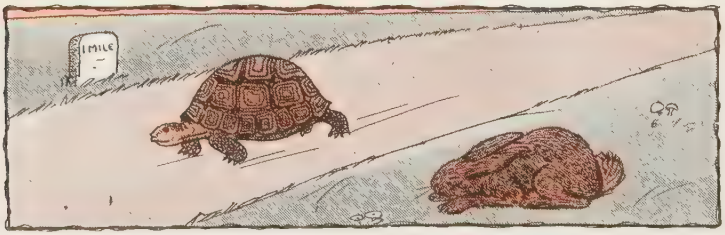
" That shows she likes butter," said Uncle John.

They sat down on a dry rock in the pasture and watched Buttercup eating clover. "It's nice to think that cows eat such pleasant things," said Uncle John. "Clover blossoms and buttercups, and grass — no wonder milk is so good. It is the best food to make us grow strong.

"Milk is the food which the mother cow makes for the baby calves to live on until they are big enough to eat clover and buttercups and grass. The kind mother cow makes more milk than the little calf needs. She gives this extra milk to the babies and the boys and girls who need it to grow on just as much as the little calf needs it. Every day we should drink three or four glasses of the sweet creamy milk which the kind cow makes for us of clover and buttercups and grass and water.

"You remember the fable about the hare and the tortoise. The hare jeered at the tortoise because he was slow. But the tortoise laughed and said that he would run a race with the hare and beat him. 'Come on,' said the hare, 'you shall soon see what my feet are made of.'

"So they agreed to start at once. The tortoise went off jogging along, without a moment's stopping, at his usual steady pace. The hare dashed off quickly and was soon far ahead of the tortoise. So he thought he would lie down and take a little nap. Meanwhile the tortoise plodded on. The hare overslept himself and




THE TORTOISE AND THE HARE RUN A RACE

arrived at the goal only to find that the tortoise had got in before him.

"Boys and girls who drink tea and coffee instead of milk are like the hare. For a little while they feel warm and strong. They start the day feeling that they can beat other boys and girls at lessons and games. But later on they grow dull and sleepy. The milk-drinkers steadily pass them in class and on the playground.

"Every boy and girl should have a quart of milk a day, but no coffee or tea."

Then Uncle John told Ann and Paul a story about a boy named Peterkin and a girl named Sally who went in search of buried treasure. This is the story:

A little girl named Sally found an old boat floating on a brook. She went on board, and then

She looked within the darkish hold
For jewels fine or shiny gold;
But empty was each tiny bin,
And so she went to Peterkin.

Now Peterkin, you must know, was a sailor bold. He said to Sally:

"Since you have found the sailing ship
I'll find a crew to make the trip."
And so he brought old Pussy Cat,
All soft and furry, gray and fat.

Pussy Cat licked her whiskers and said that *she* knew where to find buried treasure. " Where? " asked Peterkin.

" You'll find it in the pasture, sir,"
Said Pussy, with a creamy purr.

Peterkin said that Pussy Cat could steer the ship. They sailed and they sailed for an hour and a minute. Then Pussy Cat shouted, " Land ahead! " The land was the pasture in which Pussy Cat said treasure was to be found.

" Now what do we do? " said Peterkin, after the boat had been safely landed and tied to an old tree stump. He started unloading pick-axes and shovels and trowels and canvas bags and yardsticks from the ship.

" We do not need any of these things," said Pussy Cat. " All we need is a pail."

" A pail? " said Peterkin. " How can we dig for treasure with a pail? "

" We do not dig for it," said Pussy Cat.

" How do we find it, then? " said Peterkin.

" There is nothing in this old pasture except a cow."

" That is where the treasure is," said Pussy Cat.

At that very minute a man let down the bars of the pasture fence and went toward the cow. He carried a shiny tin pail and a little three-legged stool. Peterkin and Pussy Cat and Sally crept toward him through the grass.

When the man with the tin pail reached the cow he sat down on his little three-legged stool and began to milk her. Peterkin and Sally watched him from behind a bush. " We must not let him get away with the treasure," whispered Pussy Cat. So when the man had finished milking the cow, Peterkin stepped out from behind the bush. He was frowning tremendously and he had his arms crossed over his breast.

" Hands up! " said Peterkin.

The man was very much surprised. " Who are you? " he said.

" I am the sailor, Peterkin."

" Well, Peterkin, what do you wish? "

PETERKIN AND PUSSY CAT AND SALLY FIND THE TREASURE

"Treasure!" said Peterkin. "Pussy Cat said there was treasure in the cow."

"Pussy Cat is right," said the man, laughing. "Milk is one of the greatest treasures in the world. Have you ever seen milk churned into butter?"

"No," said Peterkin.

"Well, you just bring your crew along, and we will go up to the farmhouse." So Sally and Pussy Cat came out from their hiding place and the whole crew followed the man. Soon they came to a farmhouse. It had a pretty red roof,

and smoke was coming out of the chimney. The farmer's wife was sitting on the porch. "Hello, Mother," said the farmer, "I found a ship's crew in the meadow. They are in search of gold. Pussy Cat, here, told them it was to be found in our cow. She is a wise cat. I've brought the crew up here to watch you make gold come in the milk."

The farmer's wife smiled and led the crew to a little room all lined with stone at one end of the house. On shelves about the room were pans full of cream. The cream was yellow and wrinkly. Pussy Cat licked her whiskers.

The farmer lifted the pans from the shelves and poured out the cream into a blue churn. The churn looked like a little barrel with a cover. When the cream was in the churn the farmer's wife put a long stick with a round board at one end into it. The farmer said that this was called a dasher. Then he put the cover on the churn. The stick came up through a hole in the cover. The farmer's wife took hold of the dasher and worked it up and down, up and

down. When she was tired the farmer worked the dasher up and down, up and down. He allowed Peterkin and Sally to take turns at working the dasher too.

It became harder and harder to work the dasher. "The butter is coming," said the farmer's wife. At last she lifted the cover from the churn and looked in.

"Let me look too," said Sally. She and Peterkin looked into the churn. Lumps of golden butter were floating about in the milk. The farmer's wife took two big wooden spoons and lifted the butter out of the churn. She put it in a wooden bowl. The milk left in the churn was full of tiny golden specks. "That is buttermilk," said the farmer. "Would you like a drink?"

"Yes," said Peterkin. So he and Sally each had a tall glassful of buttermilk to drink. It was very good. Pussy Cat had a saucerful of creamy milk. Then the farmer's wife mixed and patted the butter into little cakes with the wooden spoons. With a wooden stamp she

printed a clover blossom on top of each cake. Then she gave one butter pat to Peterkin and one to Sally. " Here is your gold," she said.

" Thank you," said Sally and Peterkin.

" Now we can go home," said Peterkin. " We have found the treasure."

" Good-by," said the farmer.

On the way back to the ship Pussy Cat sang this little song:

"Yo, ho, yo, ho, you sailors bold,
Milk is full of magic gold.
Creamy milk is spilling over
With a treasure made of clover,
Made of grass and violets,
Buttercups and bouncing bets,
Flowery sweet and smooth as silk
Is a brimming glass of milk."

When the story was ended Paul and Ann learned Pussy Cat's song. Then they helped Uncle John drive the cow home. Uncle John went into the house and washed his hands with

hot water and soap. He took the shiny tin pail that Grandmother had ready for him and milked the cow. The children watched him. They each had a glassful of milk for supper. They had baked potatoes, too, with plenty of butter, and water cress salad and brown bread and butter and Ann's custards. They were very good custards. Uncle John said they were, and so did Paul and Grandmother.

This is what Ann and Paul wrote in the Ship's Log about milk:

*Rules of the Body Ship*

Drink three or four glasses of milk a day, but no coffee or tea.

*Discoveries*

We have discovered that milk is the food which the mother cow makes for the baby calf to grow on. It is the best food of all for growing boys and girls. We must each have a quart of milk a day to grow well and strong.

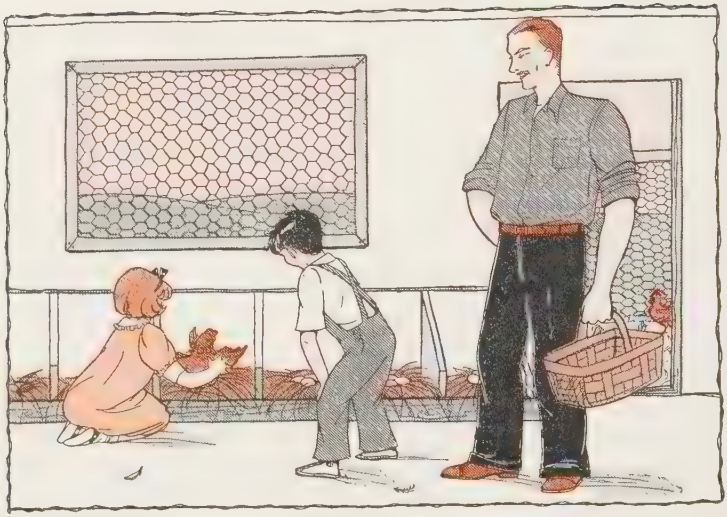
## CHAPTER XIV

### THE LITTLE BROWN HEN

The next morning for breakfast Ann and Paul each had oatmeal, a soft-boiled egg, toast, orange juice, and milk. After breakfast Grandmother said, " John, I wish you and Paul and Ann would go exploring in the henhouse sometime this morning; I need some eggs."

So before lunch Uncle John and Ann and Paul went to the henhouse to explore for eggs. Inside there were ten boxes nailed up against the wall. They found eggs in the straw in each box. They put the eggs in Uncle John's egg basket and took them in to Grandmother. Then they sat on the porch and Uncle John told them this story:

Once upon a time there was a little brown hen who lived in a small house in a back yard. This little hen was very happy. All day long she walked about and said, " Cluck, cluck, cluck."



UNCLE JOHN AND THE CHILDREN EXPLORE FOR EGGS

She ate bugs and worms and the corn that a little girl threw to her every afternoon.

Every day the little brown hen laid a pretty brown egg in a box of straw. After she had laid the egg she sang, "Kut-kut-kut-ka-daw-kit." The little girl's mother always took the egg away, and boiled it for the little girl's supper. The brown hen did not mind having her egg taken away. She liked the little girl and her mother because they gave her nice yellow corn to eat.

But one day in the spring the little brown hen was cross when the little girl's mother took her egg away. She scolded and fluffed out her feathers and made a dreadful fuss. All the rest of the day she kept thinking about that egg. She wondered and wondered how she could keep the little girl's mother from taking her egg. Suddenly she had a wonderful idea. She thought: " Tomorrow I will not lay my egg in the boxful of straw. I will hunt around and find a place that the little girl's mother can never find. Then I can have my eggs all to myself."

So the little brown hen hunted around until she found a hollow full of dead leaves out in the deep woods. The next morning when she heard the old rooster up on the fence-post call:

" Cock a doodle doo!
The sun is up, are you, are you?
Cock a doodle doo! "

the brown hen hopped down from her perch, oh, so quietly, and went tippy-toes to the deep woods. There she made a nest of the dead

leaves and laid her pretty brown egg. Every day for twelve days the brown hen laid an egg in her own little nest. The little girl's mother wondered and wondered where the brown hen was laying her eggs. But although the little girl hunted and hunted, she could not find the hidden nest.

There were twelve eggs in the nest now and the brown hen said to herself, " I will sit on the eggs and hatch out some little baby chickens." So for three whole weeks the brown hen sat on her eggs in the deep woods. She only got off the nest long enough to eat bugs and seeds and to take a drink from the brook.

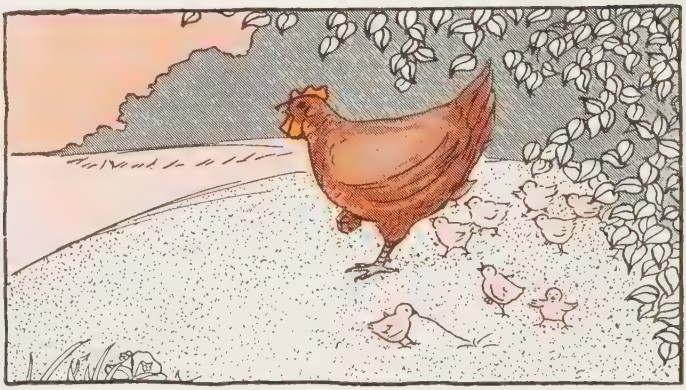
The little girl and her mother wondered what had become of their little brown hen. They thought that perhaps the bad fox who lived away off in the deep woods had eaten her.

Then one day, three weeks after the brown hen had started sitting on her eggs, the little girl went hunting wild flowers in the woods. She was poking among the dead leaves with an old stick when all at once she heard a little noise.

" Cluck, cluck, cluck." " Why, it sounds just like our lost brown hen," said the little girl.

She looked around and there she saw the little brown hen cluck, clucking, beside a nestful of brown eggs. But what do you suppose was happening to those brown eggs? The little girl could hardly believe her eyes. A bright yellow bill was poking out of each eggshell. " Tap, tap, tap," went the yellow bills. " Crack, crack," went the shells, and out of each one of those eggs rolled a fluffy yellow chick. " Cluck, cluck," said the brown hen, " come with me, my children." Away they went marching back to the little house in the back yard — the proud mother hen and the little yellow chicks.

When Uncle John had finished the story, he said: " Just think how much good food there must have been in those eggs to make the little chickens strong enough to pick their way out of hard shells. Eggs are good for boys and girls because in them is stored all the food which the mother hen has made for the baby chickens to



THE FOOD IN THE EGGS MADE THE BABY CHICKENS STRONG

live on while they are in their shells. Eggs make boys and girls grow.

" No wonder a hen is so proud after she has laid an egg. No wonder she sings, ' Kut-kut-kut-ka-daw-kit,' and struts up and down.

" Eggs are a good food for breakfast. They should always be soft-boiled or poached, never fried. It is hard for our body ships to use fried eggs."

This is what Ann and Paul wrote in the Log Book about eggs:

*Rules of the Body Ship*

Give the body ship an egg to grow on now and then.

*Discoveries*

We have discovered that the mother hen stores good food in her eggs so that the baby chickens will have food to grow on before they come out of their shells. Eggs are good to eat at breakfast now and then. They should always be soft-boiled or poached, never fried.

## CHAPTER XV

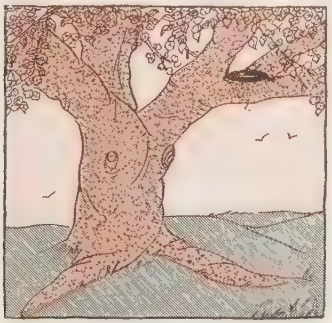
### THE SAD LITTLE APPLE TREE

In the afternoon Ann and Paul went to the apple orchard with Uncle John to see how the apples were getting along. They took some ripe apples with them to eat. It was cool and still in the orchard. In one of the trees the children saw a robin's nest, but the baby robins had all flown away.

Uncle John looked at the little green apples growing on the trees. He said, " There will be a fine apple crop this year." Then Ann and Paul sat on the stonewall to rest while Uncle John told them the story about the sad little apple tree. This is the story:

In a forgotten meadow at the edge of a forest there grew a little apple tree. It had grown from one of the seeds in an apple core which a boy had thrown on the ground. The little apple

tree used to listen to all the great trees in the forest talking to each other. The proud oak tree said: " I am the king of the forest. See my great trunk and my branches which almost touch the sky. If I am ever cut down, my wood will be used to build great ships which will sail over the blue sea to a far country."



THE FORGOTTEN APPLE TREE

The pine tree said: " My crown, too, reaches up toward the sky. If I am ever cut down, my trunk will be used as a mast. I will hold up the white sails which carry the ship swiftly through the tossing waves."

The maple tree shook its pretty, scalloped leaves, and said: " In summer my leaves throw a wide shadow on the ground. People are happy to sit under me in the cool shade. If I am ever cut down, my wood will be burned to make houses warm when the cold winter comes creeping from the North Pole."

The pointed spruce tree said: " In the winter little snowbirds warm themselves among my branches. If I am ever cut down I shall be a Christmas tree. People will hang pretty balls on my branches. I shall be lighted with little colored candles. The children will join hands and dance about me singing Christmas songs."

It made the apple tree very sad to hear all the forest trees talking about how great they were. " Of what use am I in the world? " she whispered. But no one heard her except the wind who sometimes nestled in her branches.

" Never mind, little apple tree," said the wind. " Some day you will learn what you have to give."

The apple tree was not quite so sad in the spring. She woke up one morning to find that she had on a lovely new pink and white dress. A fussy pair of robins built a nest in her branches. Soon there were pretty blue eggs in the nest, and then one day the eggs hatched out into baby robins. The apple tree was so interested in the robins that she forgot all about her-

Jack and Jane Find that the Apples Are Good to Eat

self. Her pink and white dress was blown away by the wind and soon her branches were hung with green balls that grew larger and larger. But this had happened other years, and no one had paid any attention. So the apple tree thought nothing of it. And then the green balls began to turn red. There was no pool of water close by in which the apple tree could look at herself. She did not know how pretty she looked with the red balls shining through her green leaves.

One day the apple tree heard voices at the edge of the meadow. A boy and girl were coming toward her carrying a basket. They were on the way to the woods to hunt for hickory nuts. The boy saw the apple tree. "Look, Jane!" he cried. "There is an apple tree, right at the edge of the woods! I wonder if the apples are good to eat."

"I am going to eat one and see," said Jane. She came close to the tree and pulled down a branch. She picked one of the red apples and took a big bite out of it. "It is good, Jack," she

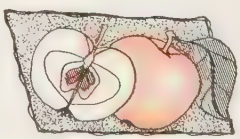
said to the boy. Jack picked an apple, too, and ate it.

"We will tell father about the tree," said Jane. "Then he can pick all the apples, and we shall have them to eat this winter."

"Now you see of what use you are in the world," said the wind to the little apple tree after the children had gone. "Every year red juicy apples grow on your branches. The sun and the rain and the air and the good brown earth help you make them grow. The children who eat your fruit are eating the sunlight and the rain and the good food of Mother Earth which you stored away inside of the apples. And so you really help children grow."

When Uncle John had finished the story he cut an apple in half and gave one piece to Paul and one to Ann. He showed them the brown shiny seeds inside of the apple. Uncle John said that when Mother Nature first made the fruit trees she thought to herself: "How shall I make sure that the seeds of the fruit trees are scattered

all over the earth? If they all fall on the ground under the mother trees and sprout there, they will be so crowded that none of them can grow big and strong. *I* know. I will wrap the seeds up in bright-colored packages. Then the birds and the animals and the boys and girls and their fathers and mothers will pick the packages and eat them and throw the seeds down on the ground far away from the mother trees where there will be plenty of room for them to grow."



So Mother Nature made bright golden packages for the seeds of the orange tree, and red and yellow and green packages for the seeds of the apple tree. For the seeds of each kind of fruit she made a special kind of package.

Mother Nature rewards the birds and animals and people who help her scatter the seeds of the fruit trees over the earth by filling the fruit packages with sweetness and juice and with a special kind of food which helps make bodies grow.

Uncle John said: " Is it not pleasant to think that fruit is a reward which Mother Nature gives us because we help her scatter her seeds? Every day we should eat some fruit because it helps us grow."

This is what Ann and Paul wrote in the Log Book about fruit:

*Rules of the Body Ship*

Eat some fruit every day.

*Discoveries*

We have discovered that fruit trees wrap their seeds in packages. They are really surprise packages because they contain good food. Every day we should eat some fruit.

## CHAPTER XVI

### PRINCESS GREENLEAF AND PRINCE GREENLESS

This is the story that Uncle John told Ann and Paul before they went to bed:

Once upon a time there was a prince named Greenless who lived in a country called Far-away. This country is not in the geography books, so there is no use hunting for it. The prince was very fond of eating. At every meal his table was loaded down with meats and pies and puddings and cakes and candy. He had wonderful cooks who could make castles and ships out of cake and candy, and birds and beasts out of sugar. When they sent a little pig roasted whole to the prince's table, it had bristles made of brown sugar and red candies for eyes and a gilded corncob in its mouth.

Now you must know that vegetables grew in the country of Greenless, but no one ate them.

The people there had never heard of eating cabbage and lettuce and peas and turnips and carrots. But they grew these vegetables in their gardens because they were pretty to look at.

Just lately a traveler from a far country had brought the prince a new kind of vegetable. It had dark green crinkly leaves and the prince had it planted in his garden next to the lovely blue-green cabbages.

Now a little way from the country of Greenless lay another kingdom. The king of that country had a daughter named Princess Greenleaf. This princess was very pretty. She had a little garden all her own in which she grew flowers and vegetables. Every day she gathered some of these vegetables and took them into the castle kitchen. The royal cook made them into delicious dishes for the princess and the king.

One day the princess said to her father, " Father, I think it would be nice for you to invite Prince Greenless here for a visit."

" Do you? " said the king.

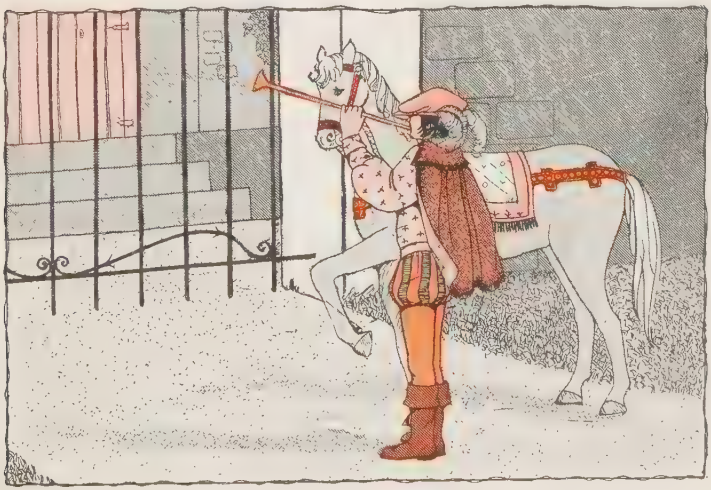
" Yes, Father," said Princess Greenleaf. And as she always had her way, sooner or later, the king sent his herald with a letter of invitation to Prince Greenless. The letter was written on fair white paper with gold edges, because the king was rich and could afford it.

When Prince Greenless had read the letter he said, " Thank you," and the herald rode home with a message that the prince would come.

Prince Greenless wished to show his gratitude for the kind invitation and so he sent a present to Princess Greenleaf. He decided to send her some of the plants with the dark green crinkly leaves and a little basket of their seeds.

In the king's castle there was now a great fixing up, the equal of which had never been seen before. As every one knew that Prince Greenless was fond of eating, the king had to hire another cook. The whole court was obliged to help in the kitchen. Wherever the princess stepped, she was sure to stumble over a nobleman in a velvet suit shelling peas or a lady in a silken gown peeling potatoes.

One dish after another was filled with the most delicious foods — custards, chocolate milk shakes, chopped fruit for salads, and every sort of vegetable that had ever been heard of. Yes, it was such delicious food that the crows licked their bills a mile away from the kitchen chimneys.

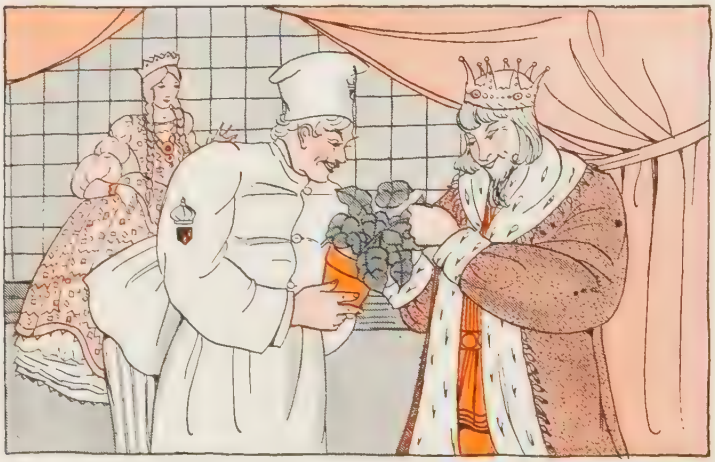


THE MESSENGER ARRIVES WITH THE PRINCE'S PRESENT

" Ta, ra, ta, ta, ra! " sounded from the courtyard. It was a bugle and now every one ran about so fast that their slippers hopped into the air because, of course, they thought that Prince

Greenless had arrived. It was not he but one of his messengers who had arrived with the prince's present for Princess Greenleaf.

"What is it, Father?" asked the princess when the messenger with a deep bow presented her with the beautiful crinkly-leaved plant and the seeds.



"It Is a New Kind of Vegetable," Said the Cook

"Yes, indeed, what is it?" asked the king. The whole court looked at the plant but they could not tell what it was because no one there had ever seen anything like it before.

The royal cook was sent for. He was old and

sensible and he had served the king for a long time. He looked at the plant and then he said, " Why, that is a new kind of vegetable! "

" Of course it is! I thought so at once! " said the king, and he looked extremely wise.

" Yes," said Princess Greenleaf. " It is a vegetable. How kind of Prince Greenless to send me what I like most! "

The old cook set to work. He washed the new vegetable and boiled it and chopped it up fine.

The next day a bugle sounded once more in the courtyard, " Ta, ra, ta, ta, ra, ta! " This time it really was Prince Greenless coming with his men. The prince was fat and pale and puffy looking and the princess was a little disappointed in him, but she had been too well brought up to show it.

The king entertained the prince before dinner by taking him about the palace grounds. " That is my daughter's favorite cow," said the king, pointing to a little white cow with a blue ribbon tied about her neck. " And this is my

daughter's garden," said the king, pointing to a garden patch bordered with pinks and daisies and roses and with green vegetables growing in the center.

"Very pretty," said Prince Greenless. He looked about to see if his gift had been planted in the garden, but it was nowhere to be seen. He looked in the parlors, too, to see what had become of his beautiful plant, but it was not there.

At last dinner was ready. The whole company sat down at the table. The prince thought surely that his plant would be on the table as a centerpiece; but no, it was not there. He began to feel very sad, because he had fallen in love with the princess at first sight and he was afraid that she had not liked his present. And now the waiters began to serve the dinner. But, dear me, such a dinner! The prince was very hungry, and as course after course was brought in he looked about for the great roasts of meat, pies, cakes, and rich puddings that he liked to eat. Instead there were fruits and

salads and custards, and, strangest of all, green vegetables which the prince had never eaten in his whole life. To be sure, there were broiled lamb chops, and the prince ate four of these, but oh, how he longed for just one little roast pig!

Princess Greenleaf noticed how unhappy the prince looked, and she said to herself, " It will be different when the vegetable comes." And then the vegetable came!

The king rose and made a long speech in which he thanked the prince for the rare gift, the splendid new vegetable.

But when Prince Greenless heard that they had actually cooked his beautiful plant he could not stand it. He rose, thanked the king and the princess politely for their hospitality, and begged to be excused. He had just thought of something very important that needed to be attended to at once, he said. Then he and his men went out into the courtyard, jumped on their horses, and galloped away.

" What do you suppose was the matter?" said the princess to her father.

"I'm sure I do not know," said the king. "Surely the food was very fine. I never tasted better spring peas."

"O me, O my!" said the old cook, throwing up his hands. "Have mercy on me, O king! He left because I forgot to put hard-boiled eggs about the new vegetable."

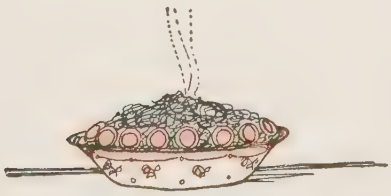
"Yes, that must have been it," said the king. But although he and the princess peeped out of the garden gate to see if the prince was coming back, he never came. No, indeed, he went back to his own country of Faraway where he got fatter and fatter, and paler and paler, and puffier and puffier because of eating too much rich food. Indeed he became so very fat that he had to be carried about in a chair for the rest of his life.

As for the princess and the king and the court, they went back to the dining room and ate up the new vegetable and wished for more. But of course there was no more. At least not until the seeds which the princess had planted in her garden had grown into new plants. They

named the new vegetable *spinach,* and if they did not like it better than any of the other vegetables they liked it *as well.* And the princess grew prettier and prettier and her cheeks grew pinker and pinker. At last she married a beautiful young prince and lived happily ever after.

After the story Uncle John told Ann and Paul that every day they should eat some plant leaves. They help protect the body ship from harm and they help it to grow. He said that they could write in their Log Book the names of all the leaves of plants good to eat and the names of all the roots of plants good to eat.

This is what Ann and Paul wrote in the Log Book next morning:



*Rules of the Body Ship*

Eat some plant leaves every day.

*Discoveries*

We have discovered that the leaves of some plants help protect the health of the body. They also help us to grow. The roots of some plants are good to eat, too. Here are all the leaves of plants that we can think of which are good to eat — lettuce, spinach, water cress, beet tops, turnip tops, cabbage. Here are all the roots of plants that we can think of which are good to eat — beets, carrots, turnips, parsnips, sweet potatoes, and white potatoes. We call plants whose leaves or roots are good to eat *vegetables*. We should eat some every day.

## CHAPTER XVII

### THE TEETH WORKMEN

The next morning Ann and Paul and Uncle John went fishing. Before they went they fed the chickens. The chickens swallowed the corn without chewing it.

"Haven't chickens any teeth?" asked Ann.

"No," said Uncle John. "A chicken chews its food in a part of its stomach called the gizzard."

"How?" asked Paul.

"The gizzard is full of fine pieces of gravel," said Uncle John. "The gravel grinds the food just as our teeth grind the food we eat."

Grandmother put up a lunch for Ann and Paul and Uncle John to take fishing. They went to the mill pond. Ann had caught a sunfish and Paul had caught two perch before it was time for lunch. Uncle John had not caught anything.

THE CHICKENS SWALLOWED THEIR FOOD WITHOUT CHEWING IT

"My," said Paul, when Uncle John opened the lunch basket, "I wish I had a gizzard instead of teeth. I'm so hungry I feel like swallowing everything whole."

Uncle John laughed. "You would be sorry if you did," he said. "Food doesn't taste half so nice if it is not chewed. Sometimes boys and girls do forget they are not like chickens and swallow their food without chewing it well. But, dear me, they have no gizzards in their stomachs to chew it for them as the chicken has. So what happens?"

" They have stomach aches," said Ann.

" Yes, sometimes they have stomach aches," said Uncle John. " Their food does not do them as much good, either. It is hard to digest badly chewed food.

" The teeth are very important workers on the body ships. They stand in two shining rows at the entrance of the little red lane which leads to the stomach. During our lives we have two armies of teeth workmen. The first army starts to come on duty when we are babies. Two at a time the teeth come marching out until by the time we are three years old we have an army of twenty. We usually call this first tooth army our ' milk teeth.' They stay on duty until we are five or six years old. Then we discharge them one by one to make room for a new army of teeth workmen. When all the teeth in the second army have reported for duty we have thirty-two — sixteen on the upper jaw and sixteen on the lower jaw. We never have another army of teeth and so we must take great care of the second.

" Now how do you suppose that we discharge our first army of teeth workmen? "

" We pull them out," said Ann.

" Sometimes," said Uncle John. " But when we pull them out, they are usually so wobbly that they almost fall out of line by themselves. This is because the teeth in the second army cut off the food supply of the first. Beneath the hard white cap of each tooth is a little hollow which contains blood vessels and nerves. The blood vessels carry the food to feed the teeth workmen. It is very important to see that the teeth workmen have the proper kind of food. Milk, fresh vegetables, fruits, and cereals are the best foods for the teeth workmen. Milk is the best of all because it contains a great deal of lime. Teeth and bones are made mostly of lime. Then we should give the teeth workmen something hard to chew on to keep them in good health. Raw apples, raw vegetables, hard breads, and toast give the teeth exercise and help to keep them clean.

" But we must not give them things which

are too hard. If we bite nutshells, thread, or hard candy we may crack through the hard white caps of the teeth. Then the nerves inside will give us a toothache very quickly.

" We need to keep our teeth workmen clean as well as properly fed. When they are well cared for, they have snow-white caps which make them a joy to behold. When they are not well cared for, we know that their owner is careless or else that he does not realize that a dirty workman is usually a bad workman.

" If we clean our teeth every single day we are not so apt to get holes in them. The toothbrush is the drill master of the tooth army. We are the captains. Every morning and every night the captain orders the brush to put the teeth through the toothbrush drill. The captain says, ' Attention! ' to the teeth. Then toothbrush starts the drill. He brushes down on the upper teeth and up on the lower teeth. ' Down, up, down, up,' goes the toothbrush. Then he brushes the gums and the tongue and the roof of the mouth.

"Toothbrush is such a good friend of the teeth that we must see that he is well taken care of. We must never lend him to any one else. We must give him a hot bath after he has done his duty. Then we must hang him up to dry in the sunlight and fresh air.

"DOWN, UP, DOWN, UP" GOES THE TOOTHBRUSH

"Sometimes tiny holes form in the teeth no matter how well we brush them. This is why we should have a dentist look over our teeth twice a year. The dentist is the general of the tooth army. He can find tiny holes and fill them without hurting the teeth. But he cannot do it without hurting unless we go to him twice a year so that he can discover the tiny holes before they become big holes. The dentist usually gives the tooth army a good scouring too. This helps to prevent the little holes and it keeps the caps looking white and shiny. You see the dentist

can help us keep our teeth nice-looking as well as nice-feeling."

*Rules of the Body Ship*

Brush the teeth every day.
Visit a dentist twice a year.
Eat the foods which build strong teeth.

*Discoveries*

We have discovered that the teeth are important workmen on the body ship. To keep their caps snow-white and to help prevent tiny holes from forming in the teeth we must brush them every day. We must take care of the toothbrush drill master. We must visit a dentist twice a year. The dentist keeps tiny holes from becoming big holes. We must drink milk and eat green vegetables, fruits, and grains so that the teeth will have plenty of good food to use. We must eat hard foods like toast and raw fruit and vegetables to exercise the teeth. We must never bite on anything hard enough to crack the white caps of the tooth army.

## CHAPTER XVIII

### HELPING ENGINEER DIGESTION

Paul had finished his ship. He was sailing it on the brook. Ann and Uncle John sat on the bank and watched him. Soon the wind died down, so Paul could not sail his boat any longer.

"I wish I had a steamboat," said Paul. He came up to sit on the bank beside Uncle John and Ann.

"To make a steamboat you would have to build a furnace in your boat and a boiler and an engine and propellers," said Uncle John. "It would be hard to do that on such a little boat."

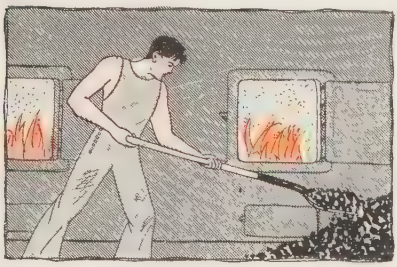
"I know," said Paul.

"Your body ship is like a steamboat," said Uncle John. "It has an engineer, too, to help keep it going."

"Tell us about him," said Ann.

"The engineer is called Digestion," said

Uncle John. "On a real ship the engineer has many workrooms and many helpers. The helpers keep the fires going so that the water in the boilers may be turned into the steam which drives the ship through the water. On our body ships Engineer Digestion has many workmen and many helpers to make the food we eat ready for the body ship to use in growing and moving about and keeping warm.



THIS MAN IS FEEDING THE FIRES ON A REAL SHIP

"As the captains of our body ships, we can assist Engineer Digestion by training his helpers and by not bothering them when they are at work. We can also help Engineer Digestion by giving him the right sort of food at the proper times. You see each part of our body ships has something important to do. If one part does not do its share, then all the other parts must suffer. There is a fable about this which was

written a long time ago. It is called 'The Stomach and Its Members.'

"In the old days when all the parts of the body did not work together as well as they do now, but each had a will and a way of its own, various parts of the body began to find fault with the stomach. They said that it spent an idle, pleasant life while they had to work to support it and supply its wants and pleasures. So they planned to cut off all supplies from the stomach in the future. The hands were no longer to carry food to the mouth, nor the mouth to receive the food, nor the teeth to chew it.

"It was not long, however, before all the parts of the body began one by one to fail and flag, and the whole body to pine away. Then the various parts of the body saw that the stomach, too, had an important work to do. They saw that they could no more do without it than it could do without them. They realized at last that if they would have the body healthy they must work together, each in his proper place, for the common good of all.

"Now let us see which of Engineer Digestion's helpers we can train. Can you think of any?"

"We can train our teeth to chew our food well," said Ann.

"Yes," said Uncle John. "We know it is hard for Engineer Digestion to use badly chewed food. There are other helpers in the mouth beside the teeth. Some of these helpers are the tasters. The tasters tell us whether or not we like the food we eat. We can train our tasters to like the food which is best for the body ships. If we eat too many sweets and spicy foods, like pickles, we train our tasters to like these foods so well that they do not like wholesome foods like milk and vegetables and fruits and cereals.

"When a mouthful of well-chewed food has gone down the little red lane to the stomach, we can help Engineer Digestion by not bothering his helpers. Can you think of any ways in which we can keep from bothering Engineer Digestion?"

CHEERFULNESS AND POLITENESS AT MEALS HELP ENGINEER DIGESTION

" Mother says that if we are polite and cheerful at table and eat slowly, our food digests better," said Paul.

" It certainly does," said Uncle John. " It bothers Engineer Digestion's helpers dreadfully to have higgledy-piggledy meals."

" In school the teacher says that we should rest or play quiet games after eating," said Ann.

" Yes," said Uncle John. " You see one of Engineer Digestion's helpers is the blood. The blood helps Engineer Digestion by carrying the digested food around to every part of the body.

" If we play baseball or run races or jump rope

just after eating, poor Engineer Digestion has to share some of the blood he needs with the muscles. Then he has to work more slowly. Sometimes he is not able to get one meal cleared away before he has to start on another. And that makes me think of another way to help Engineer Digestion. We should eat three regular meals a day and never eat between meals.

" Let us make believe that it is one of Ann's duties to put the food away and keep the kitchen looking tidy."

" It really and truly is," interrupted Ann.

" Well, Ann, suppose you have put the food away after breakfast, and then Paul comes in and makes a bread and butter and brown sugar sandwich. Suppose he forgets to put the bread and butter and the brown sugar box away and leaves crumbs and a sticky knife lying about. You clear that away and then he comes back and gets a cookie out of the cookie jar and forgets to put the jar back in the pantry. You put that back. Then pretty soon he comes in for a pickle

and leaves the pickle jar on the table. How would you feel? "

" I would feel angry! " said Ann. " I would tell Mother to make him stop."

" Poor Engineer Digestion cannot tell us to stop when we keep giving him food to clear away between meals," said Uncle John. " But sometimes he gets angry and gives us pains or headaches. Three regular meals a day are enough for Engineer Digestion to manage without getting tired and cross. He does not mind a glass of milk or some fruit now and then. But he does not like candy and cakes between meals at all. The only time we should eat sweets is after a regular meal.

" The last way of all in which we can help Engineer Digestion is to be sure that his waste pipe is cleared out every day. On a real ship the ashes left over from burning coal are thrown overboard every morning. If they were left in the furnace they would soon clog it up.

" Part of the food we eat Engineer Digestion cannot use. This waste is like the ashes left

over from burning coal. It must be sent out of the body every day if we are to feel well."

*Rules of the Body Ship*

Help Engineer Digestion make the food we eat ready for the body ship to use.

*Discoveries*

We have discovered that Engineer Digestion makes the food we eat ready to be used by the body ship. We can help Engineer Digestion by chewing our food well. We can train our tasters to like the simple food which Engineer Digestion can best handle. We can keep from bothering Engineer Digestion in his work by making mealtime a pleasant quiet time; by keeping quiet for a half hour after meals; and by eating three regular meals a day and never eating between meals. The last thing we can do is to have a bowel movement every morning to get rid of the waste food which Engineer Digestion cannot use.

## CHAPTER XIX

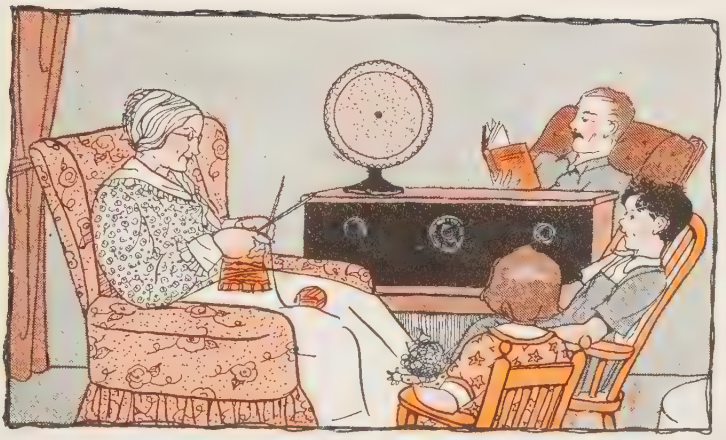
### EYES AND EARS

It was a rainy day, and Ann and Paul and Grandmother were in the living room listening to the radio. Uncle John was there, too, reading a book.

Grandmother said: " Isn't the radio wonderful? Just think, we can sit here and hear music hundreds of miles away! "

Uncle John said: " Yes, and if we think it is wonderful, what do you suppose the sailors on a ship think of it? We are here on land safe and sound, with neighbors all about us. But the ship is alone on the wide ocean. The only way the ship can keep in touch with other ships is through the radio."

Ann and Paul came over to sit by Uncle John. Whenever he started to talk about ships they thought he was going to tell them more about their body ships.



"Isn't the Radio Wonderful?" Said Grandmother

"I know what you are thinking about," said Uncle John, pinching Ann's ear. "Yes, the body ship has a radio too. You see it must have some way of keeping in touch with the outside world. The radio of a body ship has five receiving sets. They are the eyes, the ears, the skin, the tongue, and the nose.

"The tongue receives taste messages. The nose receives smell messages. The tongue or the nose examines everything which comes into the body ship. They tell us whether or not to allow it to enter. The skin receives touch mes-

sages. Touch tells us whether things are hot or cold, rough or smooth, hard or soft. We learn a great deal about the outside world through the skin receiving set.

" The most important receiving sets are the eyes and ears. If we had no eye and ear receiving sets on our body ships, we should have to live in ' darkness and stillness.'

" There was once a little girl who lost her eyesight, her hearing, and her power of speech when she was only eighteen months old. This little girl is now grown up. Her name is Helen Keller. She has written books to tell us how it felt to be cut off from the outside world.

" The wonderful part of Helen Keller's story is that she trained her touch to take the place of her eyes and ears. She learned to read by touch. She learned to write on the typewriter. She learned to talk with her fingers. Best of all, by placing her fingers on the lips and throat of her teachers, she learned how to *hear* them speak through her fingers, and how to speak herself.

" The story of Helen Keller makes us realize

how very precious our eye and ear receiving sets are. If anything happens to them, we must overcome great difficulties in order to get in touch with the outside world again. We think of sight and hearing as such ordinary everyday things that we are often careless of the way we treat our eyes and ears.

" One of the most important rules for the body ship is to protect and care for our eye receiving sets so that they may serve us faithfully our whole lives long. The first way to do this is to read only in a good light. We should never strain our eyes by reading fine print and by reading in the twilight. A good reading light should not be strong enough to make a glare or weak enough to be dim. We should always sit when writing so that the light comes over the left shoulder. We should hold a reading book about fourteen inches from the eyes.

" If we have to hold it closer in order to see fairly large print, this means that we should visit an oculist. An oculist is an eye doctor. He can

tell us whether or not we need to wear glasses in order to see better. We should visit an oculist, too, if our eyes hurt or if we feel like rubbing them all the time.

" Another way to care for the eyes is to keep them clean. If we rub them with dirty hands or with a soiled handkerchief or towel, little pirate plants may get into our eyes and make them sick. Rubbing makes them red and smarty, too. Have you ever rubbed your eyes when they felt itchy? "

THIS BOY KNOWS HOW TO TAKE CARE OF HIS EYE RECEIVING SET

" Sometimes," said Paul.

" Did it make them feel better? "

" No," said Paul. " It made them itchier than ever."

" It is hard not to rub our eyes when they itch, but we must remember that rubbing will not do

any good. If a bit of dust or a cinder flies into your eyes, it is best to let a grown-up get it out.

" The ears are another important receiving set. One way in which we can take care of the ears is to avoid colds as much as possible. Sometimes when we have a cold, the pirate plants which caused it travel along a little path which connects the ear with the throat. Then we have earache. One reason why we should learn to blow our noses properly is to keep from forcing the pirate plants along the path to the ears. This is the way to blow your nose." Uncle John took a clean handkerchief out of his pocket. " First of all," he said, " you must use a clean handkerchief."

" Paul and I take clean handkerchiefs to school every single day," interrupted Ann.

" Good," said Uncle John. " Then you cover your nose with the handkerchief, like this," he went on, holding the handkerchief to his nose. " First you close the right nostril and blow the left nostril gently. When the left nostril is clear, you close it and blow the right nostril gently.

Now suppose you try it." Ann and Paul blew their noses in the way Uncle John had shown them.

" Another way to take care of the ears is never to poke inside them with sharp things. You see the ear is very delicate. The part which shows is only the outside of the receiving set. We can keep that clean with a washcloth every morning, just as Grandmother dusts off the radio case every day. But Grandmother would never poke the inside of the radio with hairpins or toothpicks or pencils. If she did, it would stop working. If anything falls into the ear from the outside, the doctor is the one to remove it.

" These are the ways to take care of the receiving sets of our body ships. We have a sending set too. This sending set is the voice and the expression of the face. Other people judge us very often by our voices. This is why we should train our voices to be clear and pleasant. No one likes to hear a voice which sounds cross and whiny. If we have pleasant voices and smiling

faces, other people will always be glad to have us around."

This is what Ann and Paul wrote in the Log Book about the radio of their body ships:

*Rules of the Body Ship*

Take care of the eye and ear receiving sets.

*Discoveries*

We have discovered that the body ship has five receiving sets: the eyes, the ears, the skin, the tongue, and the nose. They keep us in touch with the outside world. To take care of the eye receiving sets we must read always in a good light. We must never rub our eyes. If our eyes hurt or if we cannot see well, we should go to an eye doctor and do what he tells us to do. To take care of our ear receiving sets we must avoid colds. We must learn to blow our noses properly in a clean handkerchief. We must never poke things into our ears.

## CHAPTER XX

### FRESH AIR

Ann and Paul sat under the apple tree holding their noses. "What in the world are you doing?" asked a voice just behind them. The children jumped. Their hands flew away from their noses and each one took a great breath of air. "We are trying to beat each other holding our breaths," said Paul.

"Well, which one wins?" asked Uncle John.

"Paul does," said Ann. "He can hold his breath while he counts fifteen and I have to give up at twelve."

"Now is the time to have our lesson about air," said Uncle John. "You have learned already that your bodies cannot do without air for more than a few seconds. We can live without food for forty days. We can live without water for five days. But we can live only a minute or

two without air. All animals and plants must have air to live.

" On shipboard there are pipes with great wide openings which scoop up the air. These pipes are called *ventilators*. They make it possible for men to live and work in the lowest part of the ship.

" The ventilators of our body ships are our noses and windpipes and lungs. Our noses scoop up the air. We breathe it down our windpipes into little reception rooms called the lungs. There the blood meets it. In the little reception rooms where the blood meets the air, each one gives something to the other. The air gives the blood a precious gift called *oxygen*. The blood carries the oxygen to every part of the body, even to the tips of the fingers and toes, because every part of the body needs oxygen on which to live and work.

" The blood gives the air something to take out of the body on the outgoing breath. This is waste which the blood collects from all the working parts of the body. Each time the air leaves

our bodies it carries a load of this waste. Each time it enters our bodies it carries a load of oxygen.

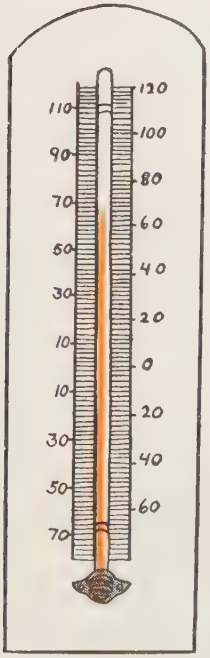
" Moving air is the best air to live in. We can always have moving air in our houses and schoolrooms if we see that the windows are open at the top and the bottom. Fresh air full of oxygen from out of doors enters at the bottom of the window. As it becomes heated it rises. The warm stale air goes out at the top of the window. Air never has a chance to become stale if we keep the windows in a room open at the top and bottom.

" When air moves in and out of the room so fast that it makes a little wind, we call it a *draft*. People who sit in drafts sometimes take cold. We can keep drafts from blowing on people in the room by putting a window-board on the lower part of the window.

" We have a way of testing the air in a room to make sure that it is comfortable for our body ships. The heat of a room is called the temperature of the room. We measure the temperature

of a room with an instrument called the thermometer."

"I know," said Paul. "We have a thermometer in our room at school. The teacher taught us how to read it last year."




What Does This Thermometer Tell You about the Heat of the Room in Which It Hangs?

"Did she tell you at what line the little pointer in the thermometer should rest?"

"Yes," said Paul. "It should rest at the line which marks 68 degrees."

"That is right," said Uncle John. "The best temperature for a room in which people are sitting in their indoor clothes is 68 degrees. If the air is always kept at this temperature or a little below, and if it is always moving, we are sure that we are giving our body ships the best kind of air.

"The home of fresh air is out of doors. Fresh air visits us in our houses when we leave the win-

dows open and we visit it when we go out of doors. Fresh air's home is very pretty. It has the blue sky for a ceiling. It has the sun for a light in the daytime and the stars and moon for

FRESH AIR'S HOME IS OUT OF DOORS

lamps at night. It has grass and flowers and trees for decorations. It has birds for an orchestra. We should spend as much time as possible in fresh air's home."

This is what Ann and Paul wrote in the Log Book about air:

*Rules of the Body Ship*

Always breathe fresh air.

*Discoveries*

We have discovered that we must have air in order to live at all. Air gives our body ships a precious gift called *oxygen*. The best air to live in is moving air. We can keep the air moving in our houses and schoolrooms by opening the windows at the top and bottom. We must be careful about drafts. We must be able to read a thermometer so that we can be sure that the temperature of the room in which we are sitting is not more than 68 degrees. We must spend a part of each day in fresh air's outdoor home.

## CHAPTER XXI

### IN THE HARBOR OF SLEEP

Ann and Paul were going to bed. Each had had a nice warm bath and they were now tucked up in their little white beds. Uncle John came up to say good-night.

"Uncle John," said Ann, "where do we go when we are asleep?"

"Your body ship goes into port to rest," said Uncle John. "You must go to sleep now, but tomorrow I will tell you about sleep."

This is what Uncle John told Ann and Paul the next morning:

"When we go to sleep the brain rests from many of its duties. The brain is the pilot house of the body ship. Here you sit, the captain of the ship, with telephone lines running to every part of your body. These telephone lines are the nerves. Around you in the pilot house sit your telephone operators. Some of the opera-

tors take care of incoming calls. They give you all messages from the receiving sets — eyes, ears, tongue, skin, and nose. They take down, too, the little pain messages which tell you that some part of your body ship is not working properly. Near by are your telephone operators who send out all outgoing messages along the nerve telephone wires. They control the speech and the movements of your arms and legs and all other parts of the body.

" The captain of a ship is very important. He leaves many of the duties of running the ship to his officers. On your body ship you leave the tasks of running the heart and lungs and stomach and other important duties to your helpers. Other duties you attend to yourself.

" Now, Paul, suppose you are walking along the street and you meet your friend, Peter Green. He says, ' Hello, Paul.' You stop and say, ' Hello, Peter,' and smile and shake hands. What happens in your pilot house in the few seconds from the time you see Peter to the time you shake hands?

" In the twinkling of a second your receiving set, the eyes, flashes a picture of Peter to you in the pilot house. Your receiving set, the ears, reports the sound ' Hello, Paul.' As quick as lightning a little cabin boy named ' Memory ' tells you that the face and the voice of Peter are the face and the voice of a friend. At once you give orders over the outgoing telephone wires: Tell the speech operator to order my voice to say ' Hello, Peter,' for me. Tell the leg operator to order the muscles of my legs to stop moving. Tell the arm operator to order the muscles of my arm to put out my hand and shake Peter's hand. Tell the face and lip operator to order a smile.

" In less than half a second your orders are carried out, although it takes five minutes to tell what happened. Remember that all this takes only half a second and then think how hard the brain must work all day long. When our body ships go into sleep harbor at night our brains rest. While the brain is resting only the most necessary work is carried on in the body

ship. Even this necessary work is done more slowly.

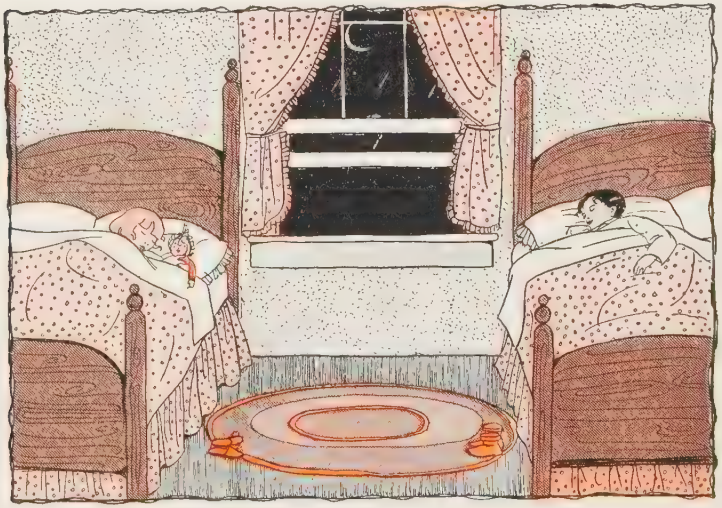
" We breathe more slowly, our hearts beat more slowly. If there is food to be digested, Engineer Digestion works more slowly. The hardest workers on our body ships during sleep are the repair men.

" They must mend the muscles, the nerves, and the brain, which are all worn out after the work of the day. It is very important that your brain and nerves and muscles should stop working for rest and repairs.

" Children grow mostly when their body ships are in sleep harbor. This is why children need more sleep than grown-up people. Ann, you are eight years old and Paul is nine years old. You need about eleven hours of sleep each night to grow and to be well and strong. The scales tell us very quickly whether or not we have enough sleep. Boys and girls who go to the movies at night or who read or play late are apt to be thin and pale and nervous. This means that they are not giving the repair men of their

body ships enough time to make their brains and nerves and muscles ready for the day.

" Now we must think of all the ways in which we can make sleep harbor a restful place.



Our Body Ships Go into Sleep Harbor for Rest and Repairs

" The first thing we can do is to eat a simple meal at night. Cereals and fruit and brown bread and milk are good foods for supper. If we eat a heavy meal at night, Engineer Digestion needs so much help that the brain is kept awake sending messages to Engineer Digestion's helpers.

" The second thing we can do is to rest or play quiet games before going to bed. A ship always has to slow down when it enters a harbor. If we do not slow down our body ships before we go to bed, then we must slow them down when we are *in* bed. Then we lie awake and wonder why we cannot get to sleep.

" The third thing we can do is to go to bed at the same time each night. A body ship works much better if the captain owns a timetable and follows it. If the captain has regular times for meals and a regular time for going to bed, all the officers on the ship know what to expect and get ready for it.

" The fourth thing we can do is to have a good anchorage for our ships in sleep harbor. An anchorage is where the captain of a real ship stops the ship and lets down the anchor. The anchorage of our body ships is a bed. The beds we sleep in should be comfortable. The bedclothes should be clean and sweet. We need just enough light covers to keep us warm. Our body ships do not like too many bed covers. Our

pillows should be low. It is really better not to have a pillow at all. The room should be dark and the windows open at top and bottom."

This is what Ann and Paul wrote in the Log Book about sleep:

*Rules of the Body Ship*

Sleep at least eleven hours every night.

*Discoveries*

We have discovered that the brain directs the work of the body ship. Our brains work so hard that they need plenty of rest. They rest when we are asleep. All the parts of our body ships which need mending are repaired when we are in sleep harbor. We grow best in sleep harbor too. To make sleep harbor a restful place we must eat a light supper. We must be as quiet as possible before going to bed. We must have clean, comfortable beds and plenty of fresh air in the room.

## CHAPTER XXII

### HOLD THE BODY STRAIGHT

Paul and Ann and Uncle John were picking cherries. Once in a while they popped cherries into their mouths instead of into the pail. Suddenly Ann began to laugh. She almost choked on a cherry pit.

" What are you laughing about? " demanded Paul.

" I was thinking about a girl in school," said Ann. " She thought that her bones were all in one piece like a cherry pit. She called a cherry pit a ' cherry bone.' "

" Well," said Uncle John, " in one way she was right. Our bones are fitted together but they are fitted in such a way that they can be moved at the joints. We move our bones with the help of the muscles which are fastened to them. Muscles work like elastic bands. They move the bones by becoming shorter.

"We must train the muscles to hold the bones of our bodies straight. You see, the bones are the framework of our body ships, and if the framework of a ship is crooked then the inside is crooked too."

Ann and Paul and Uncle John climbed down out of the cherry tree and sat on a bench under it. Then Uncle John told them about holding the body straight. First he told them a story, and here it is:

When Ulysses Said Good-bye to His Wife and Son He Stood Straight and Tall

Once upon a time there was a Greek king named Ulysses. He went to the Trojan war, leaving his wife Penelope and his son at home. He was away for twenty years and most people

in his home country believed him to be dead. There were many men who wished to marry Penelope and they begged her to choose one of them. At last they became very insolent in their demands. But Penelope still hoped that Ulysses would return, so she thought of a trick to fool her suitors. She said that before she made her choice she must weave a piece of cloth. But the cloth never grew in length because Penelope unraveled by night all that which she had woven in the daytime.

After three years the suitors discovered the trick. Then they became more insolent than ever. They demanded that Penelope make her choice at once. But the day of reckoning came at last. Ulysses, after many years of wandering, came safely back to his homeland. He had to come in secret, however, because he had been told of the suitors who would kill him if they could.

Now Ulysses was a fine upstanding man like all the Greeks. In order to disguise himself he had to think of some way to hide the strength

and straightness of his body. So he made believe that he was an old beggar. He dressed himself in rags. He stooped his shoulders and let his arms dangle helplessly at his sides. He walked with a slow, scuffing step. No one would recognize the tall, straight, commanding figure of Ulysses in this stoop-shouldered old beggar.

Ulysses as a Beggar

When he came into the hall of his own home no man knew him except his son, to whom he had made himself known beforehand. The suitors treated the old beggar with scorn. They beat him and insulted him.

On the next day Penelope said that at last she would choose one of the suitors as her husband. She said that she would marry the one who could bend the great bow of Ulysses which hung in the hall, and send an arrow through

twelve rings arranged in a line. One by one the suitors came forward to bend the bow. One by one they failed.

Then the old beggar said: "Let me try. Beggar as I am, I was once a soldier and there is still some strength in these old limbs of mine." The suitors hooted at him, and ordered him turned out of the hall. But the son of Ulysses said, "Let him try."

Then Ulysses threw off his rags. He stood up straight and tall. He seized the bow and bent it easily. He sent an arrow whizzing from the string through all the twelve rings. Now all men knew that Ulysses had come home.

Uncle John said: "Ulysses was able to disguise himself so well because no one dreamed that a stoop-shouldered man could possibly be a king used to command.

"In story books and plays the hero always stands up straight and tall. He looks other people fearlessly in the eye. In real life it is a pleasure to look at boys and girls who hold their

bodies straight. We think of them as captains who are proud of their body ships.

" The time to train the body to stand and sit properly is when we are young. A little tree that starts out growing straight grows up to be straight.

" Now suppose we see if we can discover all the ways in which we can help our bones and muscles in their work on the body ship," continued Uncle John.

Standing Tall

" First of all, we must give them the right kind of food. Bones are mostly made of lime so we must give our bones milk and green vegetables and fruit and cereals to grow on.

" Then we must learn how to stand properly. The best way to do this is always to ' stand tall.' If we stretch our bodies to make them as tall as possible, the bones and muscles fall into line like good soldiers. In the army two commands are given to make the men stand

properly. The first one is, ' abdomen in, hips flat '; the second, ' chest up, chin in.'

" Next we learn to sit properly. To do this we sit with our hips pushed against the back of the chair. We hold our heads and trunks erect and we place our feet flat on the floor. When we lean forward we lean from the hips. We never sit humped up over a desk in school."

THIS IS THE WAY TO SIT WHEN WRITING

" In our school," said Paul, " the teacher fixes our desks every term so that our seats are the right height."

" Then we must learn to walk properly," said Uncle John. " We hold our bodies tall in walking just as we do in standing. We point our toes straight ahead and lift our feet from the ground at each step. We never go slouching and scuffing along the street.

" These are the ways in which we can help our muscles to hold our bodies straight.

" You see the bones of the head and the trunk are like the boxes in which we pack our most precious possessions. The bones of the head hold the brain. The bony framework of the trunk holds the lungs, the heart, and the stomach. These three organs and others are packed in very neatly so that each one has just enough room in which to work and no more. If we stoop our shoulders and slump forward from the hips, the organs in the trunk are all crowded together and cannot work well. Is it any wonder that the boy or girl who holds the body straight feels better and looks better than the boy or girl who slouches along?

" Playing every day out of doors is one way in which the American boys and girls of today can make their muscles strong.

" Another way is to rest the muscles at regular times each day. When we rest the muscles we say that we are relaxing. For a few minutes we let our bodies go limp. Sometimes during an army drill, the drill master calls out, ' At ease! ' Then the soldiers lower their guns and let their

bodies take the positions in which they can best rest. When we relax, the brain sends out the order ' at ease ' to all the muscles."

This is what Ann and Paul wrote in the Log Book about bones and muscles:

*Rules of the Body Ship*

Train the muscles to hold the body straight. Exercise the muscles out of doors every day.

*Discoveries*

We have discovered that the bones form the framework of our body ships. The muscles move the bones and all the other moving parts of our body ships. We must train our muscles to hold the body straight. We can do this by " standing tall " and by learning to sit and walk properly. We need good strong muscles to help us work and play. We can make them strong by exercising them every day out of doors.

## CHAPTER XXIII

### COMFORTABLE CLOTHES

It was Ann's birthday. Uncle John and Grandmother gave her a set of little dolls. Uncle John had bought the dolls and Grandmother had dressed them. The Eskimo doll was dressed in

THIS IS ANN'S BIRTHDAY PRESENT

furs. The African boy doll had only a piece of cloth tied about his waist. A Japanese doll was dressed in a kimono. A Dutch doll had tiny wooden shoes. An Indian doll wore a tunic of soft buckskin. A Greek doll and a Roman doll were dressed in the clothes of long ago. An

American boy and girl doll wore the same kind of clothes that Ann and Paul wore.

Ann played a long time with her dolls, dressing and undressing them. Paul sat on the floor near by working on the doll house which he had hoped to have ready for Ann's birthday. Uncle John was helping him finish it.

" Uncle John," said Ann at last, " why does not every one in the whole world dress alike? "

Uncle John laid down his hammer. " That is a good question," he said, laughing. " People usually dress in clothes suited to the weather and to the work which they have to do. Would you like me to tell you more about clothes? "

" Yes," said Ann.

" It is very cold where the Eskimos live," said Uncle John, " and so they keep warm by wearing the furs of animals. Many wild animals wear coats suited to the weather too. Animals like wolves and foxes grow heavy winter coats of fur.

" It is very hot where the Africans live. Their

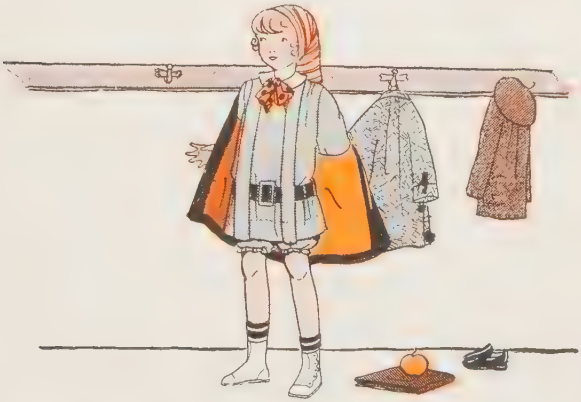
skins are used to the hot rays of the sun. They do not need to wear clothes to keep warm, and so they wear as few clothes as possible. People who go from a cool climate to a hot one must wear clothes to protect their skins from the heat of the sun. The clothes they wear are loose and lightweight so that air can reach the skin and cool it off.

" In most parts of our country we have both cold and hot weather, and so we must dress to suit each kind when it comes. Another rule for you and me is to wear clothes suited to the weather. In the winter time when we go out of doors we wear outdoor clothes made of wool or fur to keep our bodies warm. In the summer time we wear loose, lightweight clothes of linen, cotton, or silk so that the air can reach our skins easily.

" In rainy or snowy weather we put on rubbers and carry umbrellas, or wear waterproofs to protect our bodies from the wet. Wet clothes chill our bodies and make us more apt to catch

cold. We should always take off wet shoes and stockings and put on dry ones as soon as we come into the house.

"Outdoor clothes are to keep us warm and dry out of doors in cold or wet weather. Inside



WE TAKE OFF OUR OUTDOOR CLOTHES WHEN WE COME INSIDE

of our houses and schoolrooms we have furnaces or stoves to keep us warm in cold weather. And so we put outdoor clothes on when we go out and take them off when we come in. If we wear overcoats or heavy sweaters and overshoes in the house or schoolroom, we may take cold when we go out. We feel much better and work much

better, too, if we remember to take off outdoor wraps in the house. It is very important to wear loose clothes in any kind of weather. Loose clothes let the air reach every part of our bodies.

" The body cannot work well in too tight clothes. When the lungs are filled with air they stretch two inches or more. The lungs go down almost to the waistline and so the clothes on the upper part of our bodies should be loose enough to give the lungs plenty of room in which to hold a deep breath.

" Our clothes should be warm enough to protect us from the weather, but they should not be too heavy. It tires us out to carry a load of heavy clothes around. Our shoulders are the parts of our bodies best able to carry burdens and so the weight of our clothes should hang from our shoulders and not from our hips. We should not wear tight garters or tight waist bands or tight collars or cuffs. They hold up the blood on its journey through the body.

" Our feet are busy workmen. They live most of the time in shoes. How would you like to live

in a house that pinched you on one side and squeezed you on the other? Our feet do not like it, you may be sure. They have so much to do that they need plenty of room in which to work.

" Good shoes for growing children should be one inch longer and a half inch wider than the foot. The toes should be broad and square. The heels should be very low.

Good Shoes

" Two of the most active peoples that the world has ever known were the ancient Greeks and the Indians. The Greeks were always playing games and running races and exercising in the gymnasium. The Indians hunted and fished and went on long tramps through the wilderness. Now, Ann, if you look at the clothes on your Greek doll and your Indian doll, you will see that they are very loose. They are made to hang from the shoulders. There are no tight bands anywhere. The Greek doll wears sandals, and the Indian doll has soft

moccasins on his feet. Loose, comfortable clothes helped give the Greeks and the Indians strong, trim bodies.

"You never saw an animal, either, who had too tight a coat. The dog can run and jump and play without having his coat pinch him anywhere.

"Now suppose you write in the Log Book what you have learned about clothes, and then I will tell you how clothes can tell us something about the wearer."

*Rules of the Body Ship*

Always wear clothes which are suited to the weather. Make sure that the clothes are loose and comfortable.

*Discoveries*

We have learned that we must protect our body ships by always dressing to suit the weather. We should always take off outdoor clothes when we are inside. We must never sit in the house in wet clothes.

## CHAPTER XXIV

### CLEAN CLOTHES

" Clothes, too, tell us something about the wearer," said Uncle John. " Do you see the purple stripe on the dress of your Roman doll? "

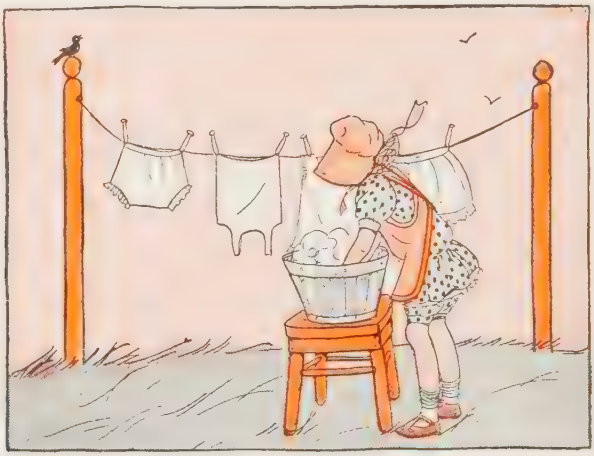
" Yes," said Ann. " I wondered what it was for."

" In ancient Rome, the dress of the men citizens was called a *toga*. A purple stripe on a toga meant that the wearer was under sixteen years of age. The Emperor wore a purple toga to distinguish himself from the ordinary citizens who always wore white. All through history, clothes told people something about the position of the wearer. In the Middle Ages the knight wore armor. A person who had been to the Holy Land wore cockle shells in his hat.

" In many countries nowadays clothes do not tell us the position of the wearer. The King and Queen of England usually dress like the other

people in their kingdom. The President of the United States wears the same sort of clothes as a business man.

" But clothes still tell us something about the wearer. They tell us whether or not a person is



We Should Wash Our Underclothes Often

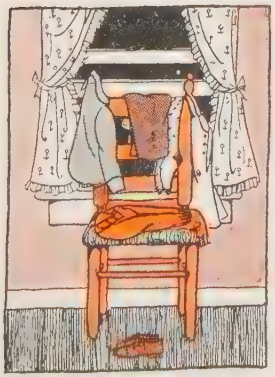
proud of his appearance. Boys and girls who are careful of their appearance wear clothes that are clean and neat.

" Our underclothes soak up the perspiration which is always flowing out of the pores of the skin. We should wash them often to keep them clean and sweet-smelling. You children are old

enough to learn how to wash your own underclothes. They should be washed first with warm water and soap and then rinsed in clear water. It is best to hang them up to dry in the sun and wind.

" You can keep your buttons sewed on, too, and even learn to darn your stockings and sew on patches.

" Outside clothes are always picking up dust and dirt. Dirty clothes are not pleasant to look at, and they are good hiding places, too, for the little pirate plants. Your outside clothes should be made very simply and of washable material so that they can be washed often. Clothes that will not wash should be brushed and aired often.



OUR CLOTHES NEED A GOOD AIRING AT NIGHT

" You should learn to dress tidily, too. Every morning before you come downstairs you, as the captain of your body ship, should have a dress in-

spection. This means that you see that your shoes are clean, your stockings fastened, your shoe laces tied, and all your buttons buttoned. On board ship the captain always has morning inspection. Then woe to the sailor whose appearance is not clean and neat!

" At night you should take off all your day clothes and wear night clothes in bed. You should shake each garment as you take it off and hang it up where it will get a good airing."

*Rules of the Body Ship*

Wear clean clothes.

*Discoveries*

We have discovered that clothes tell people whether or not we are proud of how we look. Our clothes must always be clean and tidy. We must wash our underclothes often. We must try to wear clothes which are simple and easy to keep clean, and hang them up to air at night.

## CHAPTER XXV

### THE LITTLE MOUSE WHO WAS NOT AFRAID OF ANYTHING

One day Uncle John told the story of the little mouse who was not afraid of anything. This is the story :

Once upon a time there was a little mouse named Pitter who lived in Mouse City. All the houses were built of cardboard boxes, and cheese was sold in all the grocery shops. This little mouse was not afraid of anything. He was always saying to his mouse friends, " I dare you to jump on the back of that truck," or " I dare you to jump off that wall," or " I dare you to climb that tree." He did not like to have his mouse mother say, when she sent him to the grocery store for cheese, " Be careful how you cross the street, Pitter." He did not like to have his mouse father say, as he started for school, " Run fast if you hear Mrs. Cat coming."

PITTER DID NOT LIKE TO HAVE HIS MOTHER TELL HIM TO BE CAREFUL

"Oh, pooh, I'm not afraid of Mrs. Cat," said Pitter to his friends on the way to school. Pitter had never seen a cat. But one day as he turned a street corner Pitter met Mrs. Cat face to face. Pitter caught just one glimpse of gleaming eyes and sharp white teeth. Then he started to run and Mrs. Cat ran after him. Just in the nick of time Pitter reached a hole in the street paving. The hole had been put there for just such a happening as this. It was called a cat escape. Pitter sat in the hole trembling with fright until

Mrs. Cat went away. Then he crept out and ran home.

Poor little Pitter had been scared almost to death. Every night he had bad dreams in which he saw Mrs. Cat's gleaming eyes and ferocious whiskers. He grew thin and pale. At last Mother Mouse said to Father Mouse: "I think we had better send Pitter to the country. He can stay with Cousin Patter until he has forgotten his fright."

And so Pitter was sent to the country. He lived in a hole in a cornfield with Patter, who was a field mouse. Patter took him on long walks through the country. Pitter was not at all like the little mouse he had been before he met Mrs. Cat. Now he was afraid of everything. He was even afraid of his own shadow. He was afraid when he heard the cornstalks rustling in the wind. The barking of a dog in Mr. Man's back yard almost scared him into fits.

One day Patter took Pitter for a walk in the woods in search of nuts. Pitter started to pick

up a hazel nut. Then he jumped back with his teeth chattering. "What is the matter?" said Cousin Patter. Pitter pointed to a little lizard which was crawling over the brown leaves.

"What is it?" asked Pitter, shaking all over.

"What am I?" asked the lizard. "I am a chameleon, that is what I am. Watch me." Mr. Chameleon reached a patch of green grass and stayed there. He had been gray-brown before, but now he was turning green to match the grass.

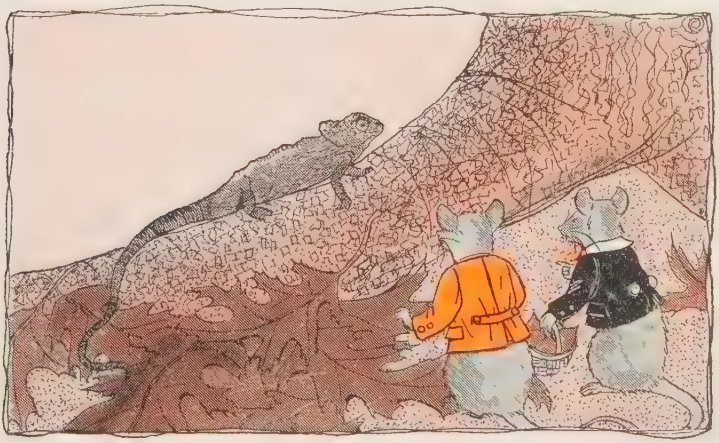
"What makes you turn green, Mr. Chameleon?" asked Pitter, politely.

"I make myself," said Mr. Chameleon. "I can change myself into other colors, too. It all depends on which color I am sitting on. If I am sitting on black dirt I can change into a black suit with small yellow polka dots. At night I usually wear a pale yellow suit. I do it to protect myself. If I keep very still no one can tell me from the grass when I am in my green suit or from the bark of a tree when I am in my gray-brown suit. You would never have seen me if you had not made me jump when you touched

me. I can do something else, too, to protect myself."

"What?" asked Pitter.

"Watch my eyes," said Mr. Chameleon. Pitter looked closely at Mr. Chameleon's eyes.



"Watch My Eyes," Said Mr. Chameleon

They were rolling about every way. Then one eye looked at Pitter and the other eye looked at Patter. "I can keep my eye on a fly that I am trying to catch for my dinner," said Mr. Chameleon, "while the other eye is on the watch for danger. You see, I protect myself well."

" I wish I could change color to protect myself," said Pitter.

" Ha, ha," said a voice overhead, " I never change my color. I do not have to."

" Who are you? " squeaked Pitter.

" Mr. Squirrel! Try and see me."

Pitter looked up into the tree but he could not see Mr. Squirrel.

" Where are you, Mr. Squirrel? " said Pitter.

" I knew you could not see me," said Mr. Squirrel, running out on a branch directly over Pitter's head. " You see, my fur is colored black and brown and gray and those are the colors of the ground and the trees. As I live mostly in trees, it is very hard for a man with a gun to see me long enough to shoot at me." Mr. Squirrel jumped to the ground and scuttled off through the woods.

Pitter and Patter said good-by to Mr. Chameleon and went home with their load of nuts. That evening as they sat about the little straw fire in the cosy sitting room, Patter told his little cousin more about the colors of animals.

He told him of the fish far away in the seas of the south which are colored blue and green and red and yellow to match the beautiful colors of the sea plants. He told of fish in the pond near by which were speckled on top to match the little shadows on the water and white underneath to match the water itself. In this way the fish protect themselves from the larger fish in the water and from the birds and other animals above the water. Some tiny fish are so transparent that it is hard to tell them from the water in which they swim. If they were not the color of water, they would soon be eaten up by larger fish.

Then Patter told Pitter of frogs and snakes and turtles and birds and grasshoppers and katydids who are the color of the places in which they live. A mother bird sitting on her eggs in her nest keeps very still and looks very much like the leaves of the tree.

Color is not the only way in which animals protect themselves. The skunk keeps harm away by its bad smell. The wasps and bees

have stings. The kangaroo can jump right over a man on horseback. The cuttlefish can throw out a fluid which makes the water around it as black as ink so that it can escape from danger.

" But what can the poor little mice do to be safe? " said Pitter.

THE KANGAROO CAN JUMP RIGHT OVER A MAN ON HORSEBACK

" We can run fast," said Patter, " and we can disappear down a hole when Mrs. Cat is after us. Another thing we can do if we are wise is to keep away from danger. It is very, very foolish to play with danger. It is silly for little mice to

dare each other to do dangerous things just for fun. If it is our duty to do a dangerous thing then we should do it, and we may risk our lives to save another mouse's life. These are the only two excuses for putting our lives in danger. Isn't it wonderful to be alive, to be able to see and run and jump? Think, then, how foolish we are to risk losing our lives, or our limbs, by doing silly things that will never help any one.

" It is no disgrace to be afraid of real danger. The very bravest mice are afraid of a mousetrap or of Mrs. Cat.

" But if you learn to know what is really dangerous, then you need not be afraid of everything. Just because Mrs. Cat scared you is no reason why you should jump at your shadow or be afraid of the dark, or the rustle of leaves in the wind. A wise little mouse learns to know what is dangerous and keeps away from it. He is not afraid of anything else."

From that time on Pitter began to get well. When he came back to Mouse City he was no longer afraid of everything. He was only afraid

of real danger. When the other little mice laughed at him and called him " 'fraid cat " because he would not catch rides on trucks or go roller-skating in traffic, he only smiled. And so he lived to a good old mouse age.

This is what Ann and Paul wrote in the Log Book about carefulness.

*Rules of the Body Ship*

Never play with danger.

*Discoveries*

We have learned that it is foolish to play with danger anywhere. The only reasons for running our body ships into danger are in doing our duty or in saving some one's life. We must never take foolish dares. It is so wonderful to be alive, to be able to see and run and jump, that we must never risk our lives and limbs by doing silly things which will never help any one.

## CHAPTER XXVI

### GOING HOME

Father was coming to take Ann and Paul home. They could hardly wait to see him. They wanted to show him the Log Book. Best of all, they wanted him to see how well they looked. Their cheeks were rosy. Their legs and arms were sturdy and brown. Uncle John had weighed them on the bathroom scales and they found that they had each gained four whole pounds.

"Do you know why you have gained?" asked Uncle John.

"Yes," said Ann and Paul together.

"Tell me," said Uncle John.

"We gained because we drank lots of the milk that Buttercup gave us," said Ann.

"We gained because we ate a warm breakfast every morning," said Paul.

"We ate fruit and vegetables every day," said Ann, "and helped Engineer Digestion."

"We did not eat between meals, either," said Paul, "except for a glass of milk in the morning, and an apple in the afternoon."

"We slept eleven whole hours every night," said Ann, "and we rested in the daytime, too."

"We played outdoors all day," ended Paul.

"Good," said Uncle John. "I am proud of you both. Some day when your little ships have become big ships and you go sailing out into the world, I know that you will have wonderful adventures because you have learned how to be good captains."

Discard

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